

AN INTRODUCTION TO BUSINESS

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PREFACE

the student after he is acquainted with internal business problems.

Although the organization of material in each section of the book is a product of joint discussion, the chapters on finance, marketing, law, and taxation were written by Mr. Hicks; those on personnel, production, organization for administration, and government and business were written by Mr. Swayzee.

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C. O. S.

C. M. H.

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PART I

INTRODUCTION

MOTION PICTURE FILMS

FILMS FURNISHED FREE OF CHARGE

Source: Y.M.C.A.

*Bureau of Motion Pictures
Chicago, Ill.*

- * 1. Conowingo (2 reels)—Construction of one of the most important hydroelectric developments.
- * 2. The Story of Bakelite Resinoid (2 reels)—Popular portrayal of chemistry underlying manufacture of Bakelite.
- * 3. Across America in Twenty Hours (2 reels)—Modern air transportation, airplane design and construction.
- * 4. Power (1 reel)—Latest developments in motive power.

*Source: General Electric Company
Visual Instruction Service
Schenectady, N. Y.*

- * Yoke of the Past (3 reels)—Century of progress in agriculture.

*Source: American Museum of Natural History
New York, N. Y.*

- * 1. King of the Rails (3 reels)—Evolution of transportation—primitive to modern times.
- * 2. Carrying American Products to Foreign Lands (1 reel)—Foreign commerce of the country.

*Source: Canadian National Railway Motion Picture Library
Montreal, Canada.*

- * Power (1 reel)—Latest developments in motive power.

*Source: Westinghouse Electric & Mfg. Co.
East Pittsburgh, Pa.*

- § † Westinghouse News Reel (1 reel)—Novel accomplishments in science.

RENTALS

*Source: Society for Visual Education, Inc.
327 S. La Salle St.
Chicago, Ill.*

- † 1. Central Plains (2 reels)—Resources, trade routes, industries, cities.
- † 2. Middle Atlantic States (2 reels)—Resources, trade routes, industries, cities.
- † 3. New England States (2 reels)—Resources, trade routes, industries, cities.
- † 4. Railroad, in U. S. History (1 reel)—Growth of railroad systems and significance.

*Source: Edited Picture System, Inc.
Chicago, Ill.*

- † 1. Modern Commerce (1 reel)—Waterways of the Atlantic and the Pacific.
- † 2. Growth of the United States (2 reels)—See title.

* Available in both 16 and 35 mm.
† Available only in 16 mm.

‡ Sound films.
§ Available in 35 mm. only.

CHAPTER I

THE HISTORY OF BUSINESS

The term *business* is so generally used by persons in all walks of life that it may seem unnecessary to attempt its definition, but, like many other commonly used words, it is frequently used inaccurately. A definition is therefore necessary to insure a common understanding of the subject matter of this text. At the outset it should be recognized that *business* and *economic activity* are not identical terms. The efforts of a person to make his own clothing, to produce his own food, and to construct his own house constitute economic activity, but they do not involve the essential elements of business, which are the production and exchange of goods for profit. Economic activity becomes business only when two or more persons offer goods or services in exchange for other goods or services, each seeking to make a pecuniary gain by the exchange. All the varied activities, undertaken with these two objectives in view, constitute what we designate as business.

C L A S S I F I C A T I O N O F B U S I N E S S

Although the limits of the classes are not precisely fixed, business may be classified under three broad headings: (1) industry, (2) commerce, and (3) the professions. Industry involves all those activities directed toward increasing the capacity of goods to satisfy human wants. In other words, the function of industry is the production of goods that may be used either by final consumers or by other businesses in the production of goods and services. Industrial activities may be further classified as extractive, genetic, manufacturing, or construction.¹

Commerce involves the creation of services. In most instances, though not always, these services are incidental to the transfer of

¹ The extractive industries include lumbering, mining, hunting, and fishing. The genetic industries include agriculture, fish culture, and forestry. The other two classifications need no elaboration.

goods. In all instances, commercial services provide indirect satisfactions. The principal divisions of commerce are transportation, storage, merchandising, banking, brokerage, and insurance.

Since the professions create services they are more closely akin to commerce than to industry. There are, however, important distinguishing characteristics. In the first place, the services of the professions are directly related to the person for whom the service is performed. The transfer of goods in connection with professional service is incidental. In the second place, compensation for professional service is more a reward for expert knowledge and training or for unusual talents than a payment for goods exchanged as an incident to the service performed. Carver lists as examples of the professions healing, teaching, inspiring, governing, and amusing.² The giving of legal, engineering, architectural, and other technical advice might well be added to this list.

BUSINESS IN THE ANCIENT WORLD

Although a relatively small part of the total population was engaged in business in the ancient world, nevertheless business played an important role in ancient life. Business units were conducted almost entirely by individual proprietors of small means who did much of their exchanging by barter. Money, however, was not unknown. It had been used for centuries by the Chinese, who, incidentally, used paper money as early as the fourteenth century. A limited banking practice was conducted by the Romans, and a primitive system of bookkeeping was used by the Babylonians.

Production and Exchange

All the products exchanged by these early tradesmen were, of course, produced by hand with the assistance of only the crudest tools. The chief articles of exchange were those of the luxury class, such as silks, perfumes, precious metals, and tooled leather, for only articles of this kind could bear the heavy costs of transportation or attract a people almost wholly self-sufficient in their domestic products.

² T. N. Carver, *Principles of Political Economy* (Ginn and Company, 1919), p. 192.

That most of the ancient world was forced to be economically self-sufficient is not surprising when one considers the great difficulties in transportation, the elementary development of money and credit, the instability of law and governments, the lack of knowledge regarding many productive processes, and the absence of motive power.

Development of Exchange.—Although great distances and the dearth of mechanical equipment were obstacles not easily overcome, the meager exchange which did take place constantly increased the desire of professional traders for more opportunities and continuously stimulated the demand of customers for new and increased satisfactions. Trade and industry were recognized by the empire builders of the ancient world as vital to the wealth and progress of their domains. Persia, Greece, Carthage, and Rome, when in the height of their power, were constantly trying to extend the limits of trade and industry over the ancient world.

The decline of the Roman Empire and its breakup by the Germanic horde after the fourth century reduced all Europe and its Mediterranean neighbors to a state of great chaos. Since neither life nor property was afforded the protection of orderly government, trade and industry could not thrive, and most of the countries retreated into a life of complete self-sufficiency at the subsistence level, which continued practically unaltered for centuries, until well into the Middle Ages.

This retreat into the so-called Dark Ages of history from a world in which trade and industry—business, in other words—were growing and developing emphasizes as nothing else can the social ramifications of business. The very process of exchange, in any but an elementary way, requires that large portions of the world maintain friendly contact with one another and that orderly governments exist to insure stability. The process of exchange indicates, too, how little is to be gained by business that makes the acquisition of wealth its sole aim. Wealth is usable only when it can be exchanged. If exchange cannot be effected, the products of business become, like the gold of Midas, wealth that is a liability and a curse.

Merchant Cities.—Trade, in a small measure, was kept alive in the Mediterranean world through the Dark Ages by such

Italian merchant cities as Venice and Genoa. Then came the influence of the Crusades. The thousands who went to these wars and traveled into new lands became filled with desire for the things they found in the old merchant centers of the ancient world. As a consequence, the merchant cities of Italy found channels of trade opening into the northern European countries. Town life was fostered by this new trade, and a new era of business was opened.

BUSINESS IN THE MIDDLE AGES

The revival of trade was carried forward by individual proprietors dealing as before, in articles of luxury. Explorers established definite sea routes to northern Europe; on land new roads were built or old ones reconstructed. Towns along these commercial routes grew rapidly, and hundreds of people drifting from the manors settled within the city walls. These townsmen began to produce and exchange among themselves, supplementing the imported articles of the old markets with the domestic products of the community. As in the ancient world all goods were produced by hand.

Specialization

In these trade centers the merchant guilds and the craft guilds developed into powerful organizations controlling such phases of business as prices, wages, quality and quantity of output. Out of these craft guilds, moreover, grew simple division of labor. As time went on, the shoemaker who had performed all the operations in the production of both boots and shoes surrendered his shoemaking trade to others and concentrated his own time and energy on the production of boots. Territorial specialization also developed early, with the result that certain products became almost universally associated with the names of cities and regions—armor with Toledo, silks with Granada, woolens with Worcester, cloth with Ypres, and lace with Brussels.

The use of money and credit was greatly extended and improved throughout the new era of trade. Banking made very rapid strides in the Italian merchant cities before the needs of business carried the greater part of the banking business northward to Antwerp and Brussels.

Nor was agriculture untouched by the trend of the period. Many of the little self-sufficient centers spread the scope of their activities greatly in order to produce quantities of raw materials to be taken to the town for processing by the craftsmen. Much of the swampy land was drained and tiled, but this was an expense only a few could afford. These forces hastened the concentration of ownership of land in the hands of a few which is still in evidence in all Europe.

The rapid push of trade, together with a changed governmental attitude, within a few centuries brought about the breakup of the guild system, and business of all kinds came to be conducted on a severely competitive basis. The very volume of business stimulated the development of wholesaling. Gradually, hand-craft production gave way to the domestic system, in which the productive steps, while carried on by various persons within their homes, were controlled by a single proprietor who provided the materials, paid the wages, and sought his market wherever opportunity offered.

Technological Development

During the Renaissance scientific discoveries resulted in sharpening people's desire to know more of the nature of the physical world. The bases of modern physics, chemistry, astronomy, zoology, and botany were all established during the next five centuries. More important still were the practical applications of scientific principles in the eighteenth century, which produced the loom and the spinning jenny operated by mechanical power. These inventions ushered in the era now known as the Industrial Revolution. Once the productive forces were unleashed by the discovery of mechanical power and by the invention of various machines to perform delicate industrial processes business developed rapidly.

The nineteenth century was one of amazing progress. To build up an extensive trade throughout all its parts the explored world needed only the immense exploitation of the natural resources that followed the improvement in methods of production. Exchange of raw materials for manufactured products spread business activities over the whole of the globe. The advantages of

large mechanized productive plants, known as factories, with masses of labor set at specialized operations of a whole process were quickly discerned. The slow travel of stagecoach and windjammer gave way to the more rapid steam train and steamship, and the transportation agencies of the world acquired not only speed but greater capacity. So swift was the opening of new markets and so rapid was the growth of volume in existing markets that the productive facilities of the business world fairly groaned under the pressure of mounting orders.

BUSINESS IN THE UNITED STATES

Business Prior to 1860

Because the struggle to found a young nation and to win a bare subsistence from the primitive resources of a raw continent occupied the greater part of our national energies for two centuries following the first settlement, the New England and the Middle colonies were, for the most part, self-sufficient agricultural territories until the time of the Revolutionary War. The severe mercantilist restrictions imposed by the English and the lack of capital in the colonies combined to prevent business from developing the complexities characteristic of modern industry. For these reasons the colonies were forced to trade their scant surplus raw materials for manufactured goods of other countries. By 1700 the colonies exported goods to England valued at £266,000 and imported products from England valued at slightly more than that figure.³ The annual exports to England from 1760 to 1770, on the average, amounted to around £1,045,000, while imports from England approximated £1,763,000 yearly.⁴ The goods involved were (1) such products of the fisheries as codfish, whale and cod oil, and whalebone, (2) such timber products as turpentine, tar, pitch, masts, and shingles, (3) livestock, (4) processed beef and pork, (5) corn, and (6) tobacco. The southern group of colonies exported goods to England in 1770 amounting to about £930,000.⁵

³ H. U. Faulkner, *American Economic History* (3rd ed., Harper & Brothers, 1935), pp. 114 *et seq.*

⁴ *Ibid.*

⁵ E. L. Bogart, *Economic History of the American People* (Longmans, Green & Company, 1932), p. 153.

While most of the southern commerce involved the sale of tobacco, some grain was also exported.

The Revolution and the War of 1812 burdened these simple agricultural economies with heavy national debts and made the scarcity of capital for business development doubly difficult to overcome. A sound currency system was needed, and while the power to control finances had been granted to the Federal government exclusively, the difficulties of insuring adequate reserves were extreme. A banking system was developed slowly, chiefly by private interests, but the system suffered from the defects of lack of co-ordination, uncertain resources, and inadequate regulation.

The economic isolation forced upon this country by the two wars with England necessitated the development of manufacturing industry. Our need of manufactured goods remained the same, but the source of supply was gone. Development in the textile industry was particularly marked in the New England States, which quickly took the lead in American textile production. Small textile shops with crude mechanical equipment copied from English models were the first factories in this country.

As the young nation spread westward one of its most pressing needs was for a close integration of its far-flung areas that would make commerce and trade easy and certain. The construction of canals and turnpikes were an important step toward the realization of this end, but this development was halted by the panic of 1837. This crisis, caused by wildcat banking, loose granting of bank charters by the states, reckless issuance of bank notes, and the speculative building of canals, roads, and new towns, brought expansion to a temporary standstill. Due in part, however, to a new transportation era based upon the tremendous railroad building program a recovery was quickly staged. Mileage in the country's railroad system leaped from about 2,000 miles in 1840 to 30,000 miles in 1860, tying the Coastal and Middle West States together as a unified trade area.

The energies of the West, during this period, were centered upon winning land from primitive nature for a "land hungry" people. The communities were very largely self-sufficient and looked only infrequently to the New England and Middle Atlantic States for some steel products and textiles. In the older centers of population, however, there was a definite growth of manufac-

turing enterprises, their number increasing from 123,000 establishments in 1849 to 140,000 enterprises in 1859.⁶ Of these approximately fifty were factory establishments. The slow growth of cities indicated the equally moderate course of growth in industry and trade. In 1790 the six cities with over 8,000 population contained 16 per cent of the country's total population. By 1860 there were 141 cities of more than 8,000. As these figures indicate, American life was definitely rural in character throughout this period.

As this period ended, additional territory was being annexed in the Far West and in the Northwest. Moreover, there were many important commercial inventions—the sewing machine, the reaper, and the telegraph—which presaged the rapid and widespread industrial and commercial development of the period after the War between the States.

Business after 1860

The unusual demands for supplies and materials created by the war gave a strong impetus to manufacturing in the Northern States, but the Southern States suffered from the disorganization of their business life for almost two decades after the conflict.

Encouraged by passage of the Homestead Act for veterans of the War between the States, settlement upon the land was once more an important development during the years from 1865 to 1890. Into and across the new land area was built the first transcontinental railroad, the beginning of the network of roads that soon was to draw the United States into a unified market and productive economy.

The National Banking Act of 1863 set up the first well-regulated general banking structure of the nation. The privilege of currency issuance was thereafter denied to all state banks and was reserved instead to the nationally chartered banks acting under the new law. The definite program to give the greenbacks issued during the war a sound redemption basis re-established business confidence in government fiscal policies.

The factory in the modern sense began to appear in some productive fields as early as 1880. At that time it was estimated

⁶ *Biennial Census of Manufacturers*, United States Department of Commerce, Bureau of the Census, 1933, pp. 18-19.

that there were 250,000 factories with an annual value product of over \$500 each and employing a total of more than two and one-half millions persons.⁷ Of all people gainfully employed in 1880, half were still engaged in agriculture, lumbering, and fishing; a quarter in manufacturing and mining, and the remainder in the trades, professions, and personal services.

Although there had been a great many labor organizations in various parts of the Eastern section of the country before the War between the States, they were for the most part local in character and of short duration. It was not until the decade from 1850 to 1860 that national organizations of any consequence developed, and most of these failed to survive the depression of 1857. With the increase in the cost of living that accompanied the war, however, the labor movement gained greatly in both strength of internal organization and numbers from 1860 to 1873. In 1869 the first all-inclusive national labor union, the Knights of Labor, was organized, and by 1870 there were about thirty national labor groups with a total membership of approximately 300,000. With the development of larger business units and the consequent sharpening of class lines, the labor movement developed steadily. The American Federation of Labor, the present nominal leader of the labor movement, was organized in 1886 under the guiding hand of Samuel Gompers. With strikes and lockouts rapidly increasing the new labor movement created a great many new problems for the slowly growing American business.

By 1890 the manufacturing centers began to shift toward the South and West, and by the turn of the present century the transformation in the industries of the Southern States was well under way. The textile industry was first to make the shift to the South, soon to be followed by the iron and steel industries. The extent of this shift is indicated by the fact that in 1860 the cotton mills of the South had but 298,000 spindles tended by 10,000 employees, but by 1900 the mills were equipped with over four million spindles and were employing more than 97,000 workers.⁸

These same figures reflect another important trend of American industry, a trend that within the first quarter of the present

⁷ *Ibid.*

⁸ K. Coman, *Industrial History of the United States* (The Macmillan Company, 1905), p. 296.

century was to develop into a major problem of national proportions. The figures for 1860 in the Southern cotton mills indicate that each employee was able to operate about 30 spindles, while by 1900 each employee was able to operate more than 40 spindles. In the terms of value of product, productivity increased from \$800 per worker to approximately \$970 per worker.⁹ This increasing productivity resulted partly from the acquired skill of the labor force but especially from the constant addition of mechanized methods of production. The scientific and mechanical genius of the nation increased physical productivity more rapidly than markets could be developed for the products. For the first time in our history supply outran demand, and the task of finding buyers in sufficient numbers to absorb the volume of products that industry could make became then, as it is now, one of the most difficult problems of the business world.

Because industrial managers substituted machines for men in many of the processes and because markets were expanding at a slower pace than was the capacity to produce, many laborers were forced into unemployment. Upon this trend—the substitution of machines for men—rests one of the major social problems of our times. It is, to be sure, a business problem, but it is more than that. It threatens the very foundations of our social structure. In the nature of technological unemployment is reflected most vividly the social responsibility of business.

T H E M O D E R N S C E N E

Population Changes

The swift pace of industry and commerce in the twentieth century has intensified the process of population concentration. The expansion of old industries and the creation of new ones have resulted in a constant drain of the population from rural areas to the urban centers, which offered a more exciting existence as well as new opportunities for employment. In 1900, 60 per cent of our population lived on farms or in towns of not more than 2,500 inhabitants. By 1930 the migration to the cities had resulted in a complete shift in the relative importance of urban and rural cen-

⁹ *Ibid.*

ters. In this year more than 56 per cent of our population lived in cities of 2,500 or more.¹⁰

This shift in population from rural to urban centers is reflected also in the change in the distribution of gainful employment. Whereas agriculture provided employment for over half of our gainfully employed persons a century ago, it accounts for little more than 21 per cent of employment today. On the other hand, the "business" occupations—manufacturing, transportation, communication, trade, and clerical work—engage the time and energy of over 57 per cent of the gainfully employed today.¹¹

Business Development

Just as the population has been concentrated in a relatively few cities, the units of industry and commerce have likewise been undergoing the process of concentration. The immensity of these units in terms of physical plant, equipment, and number of employees engaged is one of their most impressive characteristics. In 1930 the capital assets of corporations covered by the *Statistical Abstract* amounted to almost 121 billion dollars, a third of our national wealth. The capital assets of manufacturing corporations

¹⁰ *Statistical Abstract of the United States*, United States Department of Commerce, 1935, p. 6.

¹¹ *Ibid.*, p. 55. The following table gives the total distribution of gainful employment in the United States, according to the *Fifteenth Census of the United States*; 1930, volume on Occupational Statistics, p. 8.

Industrial Division	Number Employed	Per Cent of Total
Agriculture	10,471,998	21.4
Forestry and fishing	250,469	0.5
Extraction of minerals	984,323	2.0
Manufacturing and mechanical industries	14,110,652	28.9
Transportation and communication	3,843,147	7.9
Trade	5,081,467	12.5
Public service	856,205	1.8
Domestic and personal	4,952,451	10.1
Professional service	3,253,884	6.7
Clerical occupations	4,025,324	8.2
All occupations	48,829,920	100.0

alone amounted to more than 25 billion dollars.¹² This is, indeed, a reflection of "big business."

The form of business organization has undergone significant changes. The corporation now dominates the industrial and commercial business fields. Although corporations comprise little more than a fourth of the total business enterprises, more than four-fifths of both value of products and the number of persons employed are dependent on the corporate form of business. The corporate form has enabled large business units to be financed conveniently, but control has tended to become concentrated in the hands of a few persons remotely connected with those who have financed the enterprise. The masses of labor employed by a single business corporation have become removed from the corporation's managers because of the increased size of establishments and the impersonal and remote relations that are inherent in business organizations of such magnitude.

A survey of some of the more important industries in the United States will indicate both the magnitude and the variety of modern business.

Agriculture.—Despite the fact that agriculture has diminished in importance, it remains a basic industry in the United States, providing employment for 21 per cent of those gainfully employed. There are approximately seven million farms with a total value of more than 57 billion dollars.¹³ Gross agricultural income averaged more than 9 billion dollars from 1926 to 1935.

Unlike most other businesses, agriculture has not generally adopted the corporate form of organization. The individual proprietorship as a simple business form has been adequate for the simple individual farming that has been customary in this country. There are a few farm partnerships and corporations in the more specialized type of enterprise—dairy farming, cattle breeding, and the like—but the typical general farm is managed by a single proprietor. It is probably safe to say that more than 95 per cent of the farms are under the proprietorship form of organization.

One significant change in agriculture has been the increase in

¹² *Ibid.*, p. 189.

¹³ *Statistical Abstract of the United States*, 1936, p. 576. All statistical information in this section is taken from this source.

TABLE I

GROWTH OF SPECIFIED AMERICAN BUSINESSES, 1909-1929 *

INDUSTRY	NO. OF ESTABLISHMENTS (In Thousands)		NO. OF EMPLOYEES (In Thousands)		VALUE OF PRODUCTS OR SERVICES (In Millions)	
	1909	1929	1909	1929	1909	1929
Agriculture	6,362	6,289	12,372 †	10,472 †	\$ 9,954	\$11,924
Manufacturing	268 ‡	211	6,615	8,836	20,672	70,420
Retail trade	....	1,543	....	4,510	....	49,114 ||
Wholesale trade	....	169	....	1,605	....	68,900 ||
Central electric stations §	47	43	35	150	175	1,680
Transportation (steam railways)	....	....	1,699	1,661	2,555	5,775
Mines and quarries	21	20	968	900	1,238	3,300

* United States Bureau of Census.

† Includes farmers and farm laborers.

‡ Establishments with value product of \$5,000 or more.

§ Figures for 1907 and 1927 respectively.

|| Net sales.

the size of the farming unit. In 1910 the farms averaged 138 acres, but by 1935 this figure had increased to 154.8.¹⁴ It has long been maintained by many economists that agriculture can never become a large-scale industry, and although the argument has never been refuted, a number of forces have conspired to bring about the increase already noted. The most important force has been the development of agricultural power tools. The use of tractors and motor trucks, for example, has made it possible for

¹⁴ *Ibid.*, p. 570. The tendency can be seen in the following figures:

YEAR	NO. OF FARMS	NUMBER OF FARMS FROM		
		50 to 99 Acres	100 to 174 Acres	500 Acres and Over
1900	5,737,372	1,366,038	1,422,262	149,686
1920	6,488,343	1,474,745	1,449,630	217,224
1935	6,812,350	1,444,007	1,404,297	256,114

one man to do the work that formerly required many men. Another force making for increased size of farms has been the number of foreclosures that followed the business depression of 1929. In most instances, of course, the foreclosed mortgages were held by banks and insurance companies.

A problem that has developed in part from these forces is the decrease in the number of farm owners and a corresponding increase in farm tenancy. From 1900 the percentage of farm owners decreased from 63.7 to 57.2 in 1935. The percentage of tenants increased during the same years from 35.3 to 42.1. That farming remains essentially a small-scale industry, however, is indicated by the fact that in 1930 the average value of all farm property per farm was \$9,103.00.¹⁵

Banking and Insurance.—Banking constitutes another important phase of American economic life. In 1929 there were 25,330 banks in the United States, exclusive of investment banking houses. By 1935, however, this had decreased to 16,053 banks with aggregate assets of \$60,393,000,000.¹⁶ Of the banks in 1935, 5,431 were operating under charters from the Federal government and 8,460 under State charters.¹⁷ In 1930 the banks of the country were under the direction of more than 90,000 bankers and bank officials. In addition to this the banks furnished employment for thousands of cashiers, tellers, bookkeepers, and the like.

The economic significance of the banking industry is reflected in part in total deposits amounting to more than fifty-seven billion dollars. As one considers the great number of businesses and individuals that are dependent upon the security of banks, the widespread distress resulting from thousands of bank failures in 1932 is not difficult to understand.

Of equal, if not greater, economic significance are the figures showing total annual bank clearings—significant because they indicate the degree to which banking institutions assist in the exchange of goods and services. In 1929 bank clearings amounted

¹⁵ *Statistical Abstract of the United States*, 1936. It should be noted that increased use of agricultural power tools has also contributed much to the success of intensive agriculture.

¹⁶ *Ibid.*, p. 242.

¹⁷ *Ibid.* In 1929 the number of national banks was 7,536 and State banks 14,437.

to more than seven hundred billion dollars. Although these figures were greatly reduced during the depression years, they remained as high as three hundred billion dollars in 1935.

Another facilitating industry whose business problems are much the same as those that are found in banking is insurance. In 1933 there were 328 legal reserve life insurance companies in the United States with an aggregate of approximately ninety-two billion dollars of insurance in force. Total assets in this year were around twenty-one billion dollars and payments to the policy holders aggregated three billion dollars.¹⁸

There were 726 fire and marine insurance companies in 1934 with total assets of two and a quarter billion dollars. Casualty insurance accounted for 179 additional companies with assets of almost two and a half billion dollars. These property insurance companies paid out almost seven hundred million dollars in losses during the year.¹⁹

Transportation.—The tremendous growth of industry and commerce is in part reflected in the development of steam railroads. In 1900 slightly more than 192,000 miles were in operation. This is to be compared with 254,347 miles in 1935. The total investment in steam railways is slightly more than twenty-five billion dollars or \$106,000 per mile. The importance of the railroad industry as a means of employment can be seen in the fact that in 1935 the railroads distributed over one and a half billion dollars in wages to 994,000 employees. But the full economic significance of the railway industry cannot be measured statistically. Its importance as a link between all parts of our economic structure and as a means of maintaining political unity cannot be measured in dollars or ton-miles.

In 1932 there were 706 electric railway companies with over 20,000 miles of track and equipment valued at approximately four billion dollars. The electric railways provide employment for around 180,000 workers.

Because of flexibility of operation, motor bus transportation

¹⁸ *The Insurance Year Book, Life Insurance Volume, 1933-1934* (The Spectator Company), p. 3.

¹⁹ *Statistical Abstract of the United States, 1936*, p. 280.

has developed rapidly within the past few years. In 1935 there were 4,700 motor bus companies employing over 106,000 workers and operating 45,000 busses. During that year the total investment was more than four hundred million dollars and the routes covered nearly four hundred thousand miles. In the passenger field the development of motor bus transportation offers very serious competition to the railways.

The mode of transportation which is as yet undeveloped and which holds great promise for the future is the airplane. In 1935 air transportation companies operated 459 planes and employed more than 8,000 workers. That the airplane may become a serious competitor to the railways for high-rate traffic is indicated by the fact that almost a million passengers and five million pounds of express were carried in 1935.²⁰

Manufacturing Industries.—The development of "big business" in America can be seen most clearly in the manufacturing industries. In 1899 there were 207,514 manufacturing establishments in the United States employing approximately 4,700,000 workers and producing goods valued at \$11,406,926,701.²¹ So great was the concentration that by 1929 the 209,862 manufacturing establishments employed almost eleven million wage and salary employees (about 23 per cent of the total gainfully employed) and produced goods valued at \$69,960,909,712. The increase in the average size of manufacturing units is shown by the fact that 12,000, or 6 per cent, produced goods valued at forty-nine billion dollars.²² Equally noticeable has been the geographical concentration of manufacturing, with 39 thousand factories located in the State of New York; 17 thousand in Pennsylvania, and 15 thousand in Illinois.

The magnitude of the problems confronting the business executive can be demonstrated in part, at least, by an examination of our most important single industry—the manufacture of motor

²⁰ All statistical information on transportation is taken from the *Statistical Abstract of the United States*, 1936, pp. 370-402.

²¹ *Biennial Census of Manufacturers*, 1933, pp. 18 *et seq.*

²² Sixty-nine thousand factories had an annual production of under \$20,000; 145,000, under \$100,000, and around 65,000 were America's larger manufacturing establishments with an annual output of over \$100,000.

vehicles.²³ This industry is a product of the twentieth century, its most rapid growth having taken place since the World War. In it the most advanced principles of scientific management are manifest. Division of labor, standardization of process and product, and combination into large producing units are developed to a high degree.

In 1933 there were one hundred and twenty-two establishments manufacturing motor vehicles, exclusive of parts, bodies, and supplies. These companies produced goods valued at \$1,096,-946,000, which included 1,500,000 passenger cars, 213,000 trucks, and around 1,500 motor busses. The industry represents a capital investment of almost two billion dollars.

In 1929 the automobile industry employed over 200,000 wage earners and distributed almost \$375,000,000 in wages. If one adds to these figures the 701 establishments which manufacture automobile bodies and parts, the importance of the automobile in modern economic life is magnified. These factories employ an additional 150,000 workers and in 1929 paid out wages aggregating \$365,000,000.²⁴ It has been estimated that the industry furnishes employment, directly or indirectly, for five million persons. The

²³ The ten most important industries in the United States in 1929 ranked as follows:

Industry	No. of Establishments	No. of Wage Earners	Value of Product
Motor vehicles	244	226,116	\$3,722,793,000.00
Meat packing	1,277	122,505	3,434,654,000.00
Steel rolling mills	468	394,574	3,365,789,000.00
Foundry and machine shop products	8,605	454,441	2,791,462,000.00
Petroleum refining	390	80,596	2,639,665,000.00
Electrical machine and supplies	1,802	328,722	2,300,916,000.00
Printing and publishing	11,524	129,660	1,738,299,000.00
Women's clothing	8,082	187,500	1,709,581,000.00
Bakery products	20,785	200,841	1,526,111,000.00
Cotton goods	1,281	424,916	1,524,177,000.00

²⁴ Except where otherwise indicated, the information on motor vehicles was taken from the *Statistical Abstract*, 1936, pp. 756-783.

National Automobile Chamber of Commerce estimates that there were 35,265 automobile dealers and 102,469 retail outlets in 1934.²⁵ That it plays a very important role in our economic life is further shown by the fact that automobiles are our third most important export. In 1929 the motor vehicle industry exported almost 18 per cent of its total production. In 1933 more than 110,000 cars and trucks were exported.

Distribution.—Still another reflection of the extent and magnitude of modern business is found in the growth of our distributive industries, wholesale and retail. Although detailed information is included in later chapters of this book, a few general statistics are given here to allow comparison with other major branches of industry and commerce.

In 1933 there were 164,170 wholesale establishments employing one and a quarter million workers and having a payroll of almost two billion dollars. In addition they provided income for 94,000 proprietors and owners.²⁶

The tendency toward the corporate form of organization and increased size of the business unit is no less noticeable in wholesale distribution than it is in other fields of business. Although the corporate form is used in only 60 per cent of all wholesale establishments, it accounts for almost 75 per cent of the total net sales.²⁷ Co-operative enterprises account for about 3 per cent of the total net sales.

In the retail field three and a half million workers were employed in slightly more than one and a half million stores in 1933 and drew wages and salaries aggregating almost three billion dollars. By far the greater number of retail stores are independently owned (1,349,337) but they are, for the most part, small in size and account for a little more than 70 per cent of the total retail

²⁵ *Automobile Facts and Figures*, 1934 ed., p. 69.

²⁶ *Statistical Abstract*, 1936, p. 790.

²⁷ *Fifteenth Census of the United States: 1930, Distribution*, Vol. II, Table 8, p. 92. The *Statistical Abstract* reports the following (p. 790):

NUMBER OF STORES WITH NET SALES: 1933	
Under \$50,000	43,447
\$50,000-\$99,999	12,498
\$100,000-\$199,999	10,008
\$200,000-\$499,999	8,336
Over \$500,000	4,743

business. Chain and house-to-house retail outlets constitute about 10 per cent of the total number but enjoy approximately 26 per cent of the total retail business. Aggregate net retail sales amounted to a little more than twenty-five billion dollars in 1933.²⁸

Approximately 16 per cent of retail stores operate under the corporate form, but they account for a little more than 48 per cent of the total business.²⁹

The field of distribution that has developed most rapidly in the last two decades is advertising. The 14,000 newspapers, 6,500 magazines, and 13,000 other periodicals in the United States enjoy an annual advertising revenue of approximately 600 million dollars. Of this amount about 200 million comes from national advertisers and 400 million dollars from local merchants. In addition to this, each of the two largest radio broadcasting companies—National Broadcasting Company and Columbia Broadcasting System—has an annual advertising revenue of 55 or 60 million dollars. Supplementing these services are approximately 49,000 advertising agents.³⁰

Trade with foreign nations has developed as rapidly as domestic trade. The century ending in 1930 saw an increase in value of exports from seventy-four million to approximately five billions dollars. Imports during the same period mounted from seventy-one million to more than four billion dollars.³¹

Construction.—Although the construction industry has suffered a severe setback since 1930, it has always been one of our most important industries. In 1929 it furnished employment to 828,000 wage earners and paid wages amounting to one and a half billion dollars. Despite the depression it engaged in more than 113,000 building projects in 1935 with a total value of almost two billion dollars.

In 1929 the construction enterprises were about evenly divided between general contractors and subcontractors, 36.4 per cent of the total number being corporations, 44.4 per cent proprietorships, and 19.2 per cent partnerships.³²

²⁸ *Statistical Abstract of the United States*, 1936, pp. 790-799.

²⁹ *Fifteenth Census*, op. cit., *Retail Distribution*, Part I, p. 8.

³⁰ K. M. Goode, *Modern Advertising* (Halcyon House, 1937), pp. 303-308.

³¹ *Statistical Abstract of the United States*, 1935, p. 415.

³² *Ibid.*, *The Construction Industry*, pp. 9 et seq.

The construction industry presents extremely difficult problems to its management, the most important of which arise out of seasonal changes. It can furnish employment for little more than eight months during the year. Problems of idle equipment and labor turnover therefore are accentuated.

Mining.—Another basic American industry is mining and quarrying of mineral products. In 1935 there were about 12,000 mines and quarries producing an aggregate value of \$3,688,000,-000, of which approximately 20 per cent were metallic minerals. Of the total number of mines, 5,923 produced coal and employed around 600,000 wage earners.

According to the Census of 1930, two-thirds of all mining enterprises were operated under corporate management. Moreover, large-scale production units accounted for the major part of the total produced. Slightly more than 4 per cent of the total number of enterprises contributed 60 per cent of the total production and employed almost 47 per cent of all workers in the industry. Conversely, 68.8 per cent of the total number accounted for only 7.8 per cent of the total value of goods produced.²²

The difference in cost of production from one mine to another is especially noteworthy. Mining costs vary greatly according to the quality of the mine itself. For example, coal veins close to the surface of the earth can be worked much more cheaply than those veins which lie far under the ground. In the second place, mining costs vary according to the distance of the mine from the market. All minerals, especially coal, are bulky and heavy, and transportation charges constitute a major part of the total cost. Those units, therefore, that have adequate transportation facilities and are located close to the markets enjoy a great differential advantage over other mines.

Integration has developed rapidly in the mining industry. This has resulted primarily from the desire of manufacturing industry to control its own sources of fuel supply. The United States Steel Corporation, for example, is one of the largest mine owners.

Public Utilities.—One of the most notable developments of the twentieth century has been in the improvement of electrically driven power tools and the creation of countless electrical house-

²² *Ibid., Mines and Quarries: 1929*, pp. 14 et seq.

hold appliances. This has resulted in a tremendous increase in the importance of public-utility power plants. In 1902 only four and three-quarters billion kilowatt-hours were produced. By 1935 electrical production had reached a total of more than ninety-nine billion kilowatt-hours. This production came from 3,429 central electric stations in the United States and was distributed among almost twenty-four million consumers. Although the great proportion of electrical power has been produced by commercial companies, there has been a notable increase in the number and importance of municipally owned electric companies.²⁴

Qualitative Business Changes

The review of the development of American industry just completed has indicated the degree to which quantitative changes have taken place. Of equal, if not greater, importance, however, have been the very great qualitative changes. The technique of business—the manner of making and doing—has been transformed from the realm of pure chance to the realm of science. On every side is evidence of the application of scientific principles. Business rules of thumb have given way to the tested methods of

²⁴ *Statistical Abstract of the United States*, 1936, p. 348. *Moody's Investment Manual, Public Utility*, 1932, pp. xviii-xxii, yields the following information for 1927: number of central electric and power stations, 4,335; employees, 251,020; salaries and wages, \$367,630,000; value of plants and equipment, \$9,297,000,000; and income, \$1,963,000,000.

The following table indicates significant economic changes in various geographical areas of the United States:

AREA IN U. S.	CENTRAL POWER STATION PRODUCTION (Millions of Kilowatt Hours)	
	1912	1931
Northeast	865	5,973
Middle Atlantic	3,548	21,421
East North Central	2,528	20,376
West North Central	713	5,617
South Atlantic	730	10,106
East South Central	228	3,641
West South Central	234	4,539
Mountain	845	2,953
Pacific	1,878	12,053

science. Machines become antiquated with astonishing rapidity, but it should be observed that business has fostered and encouraged this rate of change by the maintenance of elaborate research programs under the direction of scientific experts. In terms of change and progress and the adaptation of pure science to industry, there has been no similar period in the history of mankind. It was entirely fitting that the Chicago World's Fair of 1933 was called the "Century of Progress."

The Scientific Method.—This almost universal application of science to the physical problems of production has encouraged a new mental attitude toward all business problems. Business cannot, of course, be classified as a science, but the *scientific method* has penetrated business at almost every turn. Except for most of the very small business units where problems are usually approached with guesses, intuition, and "hunches," business has discovered that success comes only from careful observation and analysis of facts and from the effective application of the facts thus gathered to the problem at hand. This is the essence of the scientific method. Working rules, laws, and principles of action result only from painstaking and impartial gathering of facts. The continued reappearance of the same response or reaction to a given stimulus enables the observer to lay down a working principle or law. The key words of science are *observation, experiment, facts, analysis, and principles*.

The scientific method is distinguished also by the attitude that nothing is final. All knowledge is presumed to be subject to change. It is tentative, contingent. Continuous, unceasing study, therefore, is a primary characteristic of the scientific method and a prerequisite to success in the modern business world. The invasion of science into business promises results no less important than have come to other fields of endeavor.

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P R O B L E M S

1. Distinguish between *business* and *economic activity*. Make a list of economic activities that cannot be classified as business.
2. "Commercial business is a product of civilization." Use illustrative material to demonstrate the truth of this statement.
3. Using the business classifications found on the first pages of this chapter, prepare a chart or table on which you indicate the chief differences between the business of ancient, medieval, and modern times.
4. "One business breeds another." How do historical facts bear out this statement?
5. "The nineteenth century was one of amazing progress in productive methods." In what respects did the nineteenth century differ from the sixteenth? From the twentieth?
6. How would you characterize the modern factory? In what aspects is it strictly modern?
7. List the major business changes that have taken place in this country since 1860.
8. What is meant by *scientific management*? In your own contacts with business have you observed business practice which could be classified as scientific? If so, list these practices. Can you recall evidences of unscientific management?
9. "All knowledge is presumed to be subject to change. It is tentative, contingent." What does this statement mean? How is it re-

lated to business? Illustrate its relationship to other fields of activity.

10. After consulting the *Statistical Abstract of the United States*, the *Biennial Census of Manufacturers*, or some similar source of information, construct tables or charts that indicate the changes in business in the last fifty years that you think are significant.

CHAPTER II

THE BUSINESS ENTERPRISE

The general mass of business activity conducted daily in this country is carried on by a large number of independent enterprises or business concerns. When one compares the work of the merchant, the manufacturer, and the transportation agency, he is at first impressed with the differences which exist among them. Compared as to techniques alone they show marked disparity, but as one studies the general conduct of the enterprises, he finds a great similarity. Problems of financing, selling, employing, managing, and producing are common to all business enterprises. Problems of administration, organization, and management are basically the same, regardless of industry, location, or size. Purposes and policies must be outlined. Lines of authority and responsibility must be carefully drawn. Orders must be given and executed. Reports on progress must be prepared, and judgment as to effectiveness of alternative methods of procedure must be made.

Definition of Terms

As one observes the operation of business enterprises, it is apparent that all businesses have certain things in common. All set up a goal to be reached, establish plans to reach the goal, execute the plans in a systematic way, and judge the effectiveness of both men and plans. These various phases of business activity are not, however, all on the same plane; they fall in different categories. The first two are related to the determination of the broad purposes of business and to the judgments passed upon the effectiveness of the means by which the ends have been achieved. These fall under the heading of *administration*. The third, which relates to the method of attaining the goal, falls under the heading of *organization*. The fourth and last category is concerned with the execution of plans and falls in the *management* classification.

Administration.—The term *administration* is applied to all determinative functions. It involves the determination of the goals

to be reached or the general purposes to be accomplished and it establishes the broad policies to be followed by the business. Finally, the administrative officers, on the basis of the reports on the general operation of the business which they receive from subordinates, pass judgment upon managers, men, and plans. The administrative body of a corporation is usually called the board of directors and is responsible only to the owners or stockholders of the business.

Organization.—The term *organization* is applied to the delineation and definition of relationships that are to exist between the various functions and departments of a business and between the various persons chosen to perform the functions. Through organization, responsibilities are delegated and lines of authority are carefully drawn. It is through organization that administrative plans are carried out and orders of management executed.¹

Management.—The term *management* is expressive of all that is done to guide, direct, and supervise the actual operations of a business. It refers to the executive and operative functions usually performed by persons designated by such titles as factory superintendent, store manager, personnel manager, and so on. The managers of a business are charged with the responsibility of carrying out the policies and plans of the administrators. They are directly and solely responsible to the board of directors and, through the board, to the owners.

Only within relatively recent years has management been considered as a separate and distinct phase of business. Although the principle upon which much of it is based is of long standing, before the recent trend toward large-scale business units the owner and the manager were frequently the same. His employees were usually few in number and well known to him through daily association. This simple condition of management, however, has now become complicated by the corporate form of business, the size of a single enterprise, the number of employees, and the volume of financing involved. The magnitude and complexity of all these factors have resulted in a demand for new abilities entirely distinct from those involved in the mere performance of physical

¹ For a more complete discussion, see Chapter XXX.

labor or the giving of orders. Modern business requires the genius of co-ordination—the ability to combine and direct a complex of functions and persons. It requires *management*.

Qualities of a Manager.—A manager in a particular position must possess special qualifications, but, in addition, all executives, major or minor, need imagination, leadership, and judgment—qualities that are the very essence of good management.

The general executive or manager of a firm need not know every detail of the business. It is his first task to see beyond details and into the larger picture of the whole business and the economic structure so as to direct wisely his own enterprise with due regard for all external factors. He must never view it as a self-centered independent concern and, above all, he must never allow himself to be swallowed up in the local detail of the enterprise.

A departmental manager, on the other hand, may be expected to know a great deal of the practical details in his field. This is true not because he is not a manager in the strictest sense of the word, but because his knowledge must be relayed to the superior officer with full appreciation of all the dependence to be placed upon it. Broad vision, together with an adequate command of details, saves the departmental executive from becoming a routine supervisor and adds to his availability for a future general executive position.

It is essential in any managerial position that the executive keep abreast of the times by careful study and observation. Moreover, the period subsequent to 1929 has shown conclusively that an executive must have the social as well as the individual outlook upon matters of business. He must consider the welfare of his employees and customers as well as the corporation profits.

Functions of a Business

Although service is its social justification, every business has profits as its immediate goal. That goal is realized through the production and sale of goods or through the performance of services. Successful operation involves solution of some problems and the performance of several functions which are fundamentally the same in all businesses.

First come the many problems concerned with finance. When-

ever materials or new equipment is purchased, the question of finance arises. The pay roll for the employees is a continuous problem of finance. The request of a customer for credit can be safely granted only if the business can make sales on a delayed income basis. These and other problems that doubtless occur to the student are ample evidence of the fact that finance involves functions of major importance in any business enterprise.

Personnel management may be designated as the second function of a business. No business could operate without workers and officials. Employees must not only be obtained but they must be trained to a high degree of effectiveness. The manner of paying the personnel so as to gain the greatest efficiency while keeping within the ability of the concern to meet its pay roll is clearly one of the most common tasks of management.

Production is the third function of a business concern. A firm that offers a product for sale must either produce it or prepare it for sale. Production, in this broad sense, involves such matters as the provision of proper equipment and materials and the co-ordination of all processes without waste. To be sure, the production problems of a public utility differ from those of an automobile-manufacturing plant, but the principles involved are the same.

The fourth function of a business is marketing. All products or services of a concern must be sold if the object of the business—profits—is to be accomplished. In the extensive and highly competitive markets of this age the search for additional customers is intense. New means of attracting customers and creating the desire to purchase are essential to the sale of a firm's output. All these and many other problems involve marketing functions.

Organization for purposes of administration and management is the fifth function of a business. This involves the arrangement of the various parts of a business in some well-designed pattern that will make them work effectively to a common end. No one of the functions—finance, personnel, production, or marketing—can be permitted to overshadow the other, or to be so loosely related to the others as to make but a small part of the total capacity effective.

Environmental Influences

A moment's reflection on this discussion of business functions will reveal the fact that the problems mentioned arise from

the internal operation of the business, and that for the most part they are problems entirely within the control of the administrators and the managers. That is to say, such problems as purchasing equipment and raw material, developing a training program for the workers, handling and storing materials and parts, and outlining a sales campaign are problems that arise within a particular business enterprise from the peculiarities of that enterprise. They are, moreover, problems whose solution can be largely controlled by the management. We may refer to them as internal problems of business.² Difficult as are the internal problems, there are others, which we may call external, that continuously harass the business manager. These external problems arise from the environment in which the businessman is forced to conduct his business. Business is not conducted in the stratosphere. It is conducted on an earth having certain physical properties and populated by millions of persons with diverse interests. It is conducted in the midst of countless other institutions, many of which are working at cross-purposes with business, and all of which exercise a great influence on the character of business problems. For convenience of discussion the total environment can be divided into four categories: physical, technological, social, and economic.

Physical.—The *physical* environment involves climate, geography, geology, and topography. As will be demonstrated in greater detail later,³ climate has a very great influence upon the location of an industrial enterprise. Geological formations and topography impose very definite limitations upon both the location of a business and the type of transportation facilities that will be available to it. In turn, problems of finance, personnel, and marketing will be colored by the location of the enterprise. In the milling and the meat-packing industries the influence of physical environment is obvious. Crop failures and shortages of animals dry up the source of raw materials, without which no business can operate.

Technological.—The *technological* environment includes all the developments of science. Constant research into the natural

² The distinction between internal and external problems is made clear in L. C. Marshall, *Business Administration* (University of Chicago Press, 1921), pp. 4 *et seq.*

³ See p. 327.

sciences and new applications of science to industry make the problems of keeping up to date and of maintaining pace with competitors exceedingly difficult ones. New machines turn out goods at a lower unit cost than old ones, increasing greatly the problem of obsolescence and depreciation. New materials and processes are developed that make competition keener than ever. Sometimes they revolutionize an industry, as was true in the paint industry. They may even retire an industry, as was true of the carriage industry after the development of the automobile. The very rapid increase in the amount and complexity of technical knowledge makes the business enterpriser more and more dependent upon a body of experts. Problems of co-ordination multiply rapidly in the face of this situation.

The development of transportation technique has created problems of another kind. In former years the producer of shoes, let us say, had a rather complete control of his local market as a result of his intimate knowledge of it. He knew almost exactly how many shoes could be sold because he was informed of every birth and every death. The problem of overproduction was therefore not a serious one for him. With the development of improved transportation methods, however, he finds himself producing for a very wide market of which he has only a very slight knowledge. He is unable to predict what the demand for shoes will be because he cannot keep himself informed as to the nature and extent of population, demand, style, and other changes. His production of shoes is therefore guided, for the most part, by past experience. While this is a very useful guide, it cannot be used as a basis for predicting style changes, strikes, conflagrations, and the like. With the occurrence of some unforeseen factors the demand diminishes, and the shoe manufacturer is left with a warehouse full of unsold merchandise. These problems are augmented by the fact that the shoe manufacturer in, let us say, Brooklyn has no way of discovering just how many shoes are being put on the market by his competitors in St. Louis. This general failure to predict the market means, of course, excess production of shoes that may not be absorbed for months or years.

Still another way in which scientific advance may create problems for the businessman is the constant appearance on the market of new products that can be substituted for those already

being manufactured. The substitution of vegetable fats for butter and lard is an illustration. In the event that the new product completely displaces the demand for the old one, there arises immediately the problem of converting capital from one industry to another, a process that is almost invariably accompanied by a loss.

Social.—The *social* environment creates problems arising from its complexity and variability. Consider, first of all, the influence of law and government upon the business executive. By law child labor may be prohibited, hours of labor for women prescribed, and minimum wages for some classes of workers established. Collective bargaining may be encouraged by legislation. Unemployment insurance and workers' compensation laws may increase the businessman's obligations. The government imposes certain standards of merchandise upon producers of food products. It regulates advertising by imposing penalties for false statements. Through antitrust laws it attempts to prohibit monopolistic combinations and unfair trade practices. Taxes and assessments are levied and collected without fail.⁴

The influence of municipal regulations is no less noteworthy. The businessman must conduct his business with due regard for zoning law, building ordinances, and rules of public health. His problems are further augmented if police and fire protection are inadequate.

Public opinion represents another factor in the social environment that cannot be ignored by the business executive. There may be no material evidence of public opinion, as there is in the case of laws, but its presence is unmistakable and its force is very great. Prevailing customs as regards wages, the employment of women and children, hours of work, working conditions, and the installation of safety devices frequently are more forceful than law. The effect of public opinion upon the outcome of a strike or boycott is usually very apparent. The presence of public opinion, together with the pressure exerted by organized groups such as women's clubs, churches, and trade-unions, has resulted in the

⁴ This discussion implies nothing as to the merits of these laws. It is intended to show only the influence of government as a social force upon the operation of business.

establishment of public relations departments by many large business enterprises.

Economic.—The influence of the *economic* environment should be apparent. One important factor is the conduct of competing business—an excellent example is the pressure exerted by chain stores on independent owners. The businessman cannot charge any price that he pleases, nor can he pay what he chooses for the materials and supplies that he needs. He must yield to the pressure of an already existing price structure. Unless he is firmly established in a monopolistic position, his price problems are almost entirely beyond his control. Even the monopolist works within narrow limitations.

Equally important is the influence of facilitating business—those businesses that, though independent, are essential to the continued successful operation of other business units. An example is a relatively small machine shop or manufacturing plant which, unable to maintain a foundry of its own, is forced to locate in close proximity to an independent foundry. The importance of adequate transportation facilities (another facilitating business) and the extent to which they color business problems need no elaboration.

Additional external problems arise from the fact that the businessman has to operate within the narrow limits imposed by the financial institutions upon which he is dependent. The rules and customs of commercial and investment banks and of commercial paper houses define the limits of his financial policies. The activity of the Federal Reserve Board and the Federal Treasury Department influence very greatly the rate at which he can borrow money. Current investing habits of insurance companies, fraternal societies, and individuals further affect the behavior of the businessman.

On every side, then, the business enterprise is touched by external forces over which the individual businessman has no control. The handling of raw materials in the plant is subject to the control of the individual, but the purchase of the raw material is surrounded by forces entirely beyond his control. The worker-training program is developed by the business executive alone, but the supply of workers is ultimately controlled by external forces.

The size and style of product containers may be designed behind closed doors, but the sale of the product depends, in part at least, upon public opinion, law, and prices. As is indicated by Figure 1, the business unit cannot escape from the confining walls of its environment. Business involves much more than the purchase and sale of goods in an isolated factory or retail store.

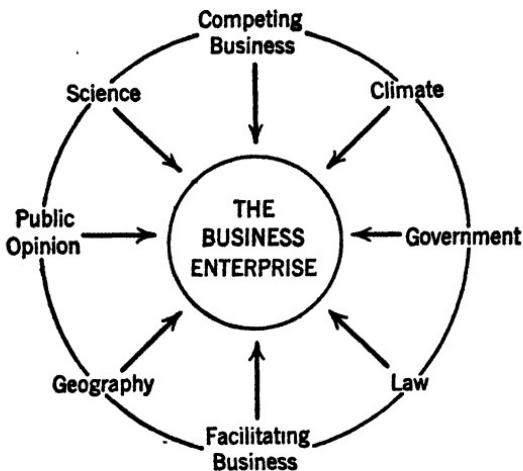


FIG. 1.—The business enterprise is under constant pressure from external forces.

An external force common to all factors already mentioned, and one of primary importance to the businessman, is the persistence of change. It may truthfully be said that the only constant factor in business is change—change in techniques, prices, methods, markets, products, competitive practices. All factors, both internal and external, are in a constant state of flux, and it is only the businessman who matches this change with vigilant observation and study who will succeed. "Woe to the business executive whose training gives him a static conception of business problems" is a warning of great significance.⁵

Social Responsibility

The foregoing discussion of environmental factors is intended to impress the reader with the extreme complexity of busi-

⁵ L. C. Marshall, *Business Administration* (University of Chicago Press, 1921), p. 10.

ness problems. The task will not have been well done, however, if there has not also been created the conviction that businessmen must accept a definite responsibility to society. They must recognize the importance of a social point of view and must discard the highly individualistic and mercenary point of view that has characterized much of the American business world for many years. There is, of course, no question that the business executive or the board of directors is obligated to the stockholders. Business is charged with the responsibility of earning a profit. Indeed, in the present economic system, no business can justify itself to its owners without a showing of profits. But it cannot be emphasized too strongly that the responsibility does not stop here, that business has an obligation to its workers and to the public no less binding or sacred than the obligation to its stockholders.

Workers are, first of all, human beings with all the rights pertaining to that status. They are entitled to working conditions conducive to health and safety. They are entitled to wages adequate for health and self-respect. As productive contributors to the value of a product they are entitled to hours of work sufficiently short to protect them against undue fatigue and to allow them to enjoy in a leisurely way the fruits of their labor and the companionship of their families. In the second place, workers are investors in a business enterprise no less than those persons who purchase shares of stock. To be sure, they surrender no money into the hands of the management, but they risk something which to them is more precious than dollars. They risk their own bodies and their own future in an enterprise operated by strangers. They contribute the genius of labor power. Many people feel that workers, like other investors, are entitled to a voice in the control of the businesses in which they work, and business executives are morally obligated to give their counsel the consideration that is due it.

The obligation of business to the public arises from the fact that the public makes business possible. It supplies the market for business. Moreover, in this modern day of specialization when everyone is dependent upon others for goods and services that he cannot himself produce, each of us relies upon others to do their part in maintaining a co-operative society. In other words, we who

constitute the public place our trust in the countless specialists who make up our society. Business specialists are honor bound not to betray that trust.

The outline of business functions and business relationships as presented in this chapter makes up the skeleton structure around which the remainder of the book is to be built. Since the first problems facing the business executive, after his decision to establish a business, are problems of finance, the first division of this book will be devoted to a discussion of this phase of business. The financial arrangements having been made, the next task is that of providing for an adequate personnel. Hence the division on finance is followed by a discussion of personnel problems—selection, training, labor unrest, collective bargaining, and the like. After financing the enterprise and providing the personnel we come next to the problems involved in the actual production of the goods and services—buildings, layout, equipment, raw materials, supplies, and storage. This division is followed by a section on the marketing of the products.

The picture of departmental operations completed, it becomes necessary to inquire into the problem of co-ordinating all the primary functions. Hence there follow the chapters on organization for administration and co-ordination of activities.

Finally, we come to a discussion of the environmental factors that exercise so great an influence upon business problems. In this section are included the chapters on the relationships of business to law and government.

It should be clear that this departmental organization of material—isolating each department, so to speak—enables the reader to get a better grasp of the operation of each department. The student can concentrate on the detail of a single department, without considering departmental relationships at the same time. In other words, we apply the principle of specialization to our study. As is true in the case of all specialists, however, there is the very great danger of failing to see the relationship between our particular field and that of others. As we study personnel problems, for example, we may overlook the important fact that personnel problems are intimately related to and are greatly influenced by

production, marketing, and finance problems. We may forget, unless we are reminded, that the problems of each department are the problems of every department, and that while the manager of finance confines his attention to matters of finance for administrative convenience, he, no less than the production manager and the sales manager, is working toward the production and sale of goods and services.

Interrelationships

The importance of viewing a business as a unit, that is, the necessity of keeping the departmental relationships ever in the foreground of our consciousness, is well illustrated by a sample business problem. In the case of a newly formed business, the original problem is that of choosing a location in which the business is to be conducted. At first sight it might appear that location is a matter of choosing a site only. But if it is recalled that the successful operation of a plant depends on the effective combination of all functions—finance, personnel, production, and marketing—there is obviously a much broader series of considerations. The influences of law, government, and the other external factors bear with strong force upon the choice of location.

Locations differ in their finance facilities. Capital is more easily obtained in the older centers where it has been accumulated in greater volume and where the knowledge of risks involved seems more certain. The better market area, nevertheless, may conceivably be in a new center which cannot contribute to the capital needs of an industry. In this situation, nearness to the market may have to be sacrificed in favor of access to the financial support required.

Personnel is usually counted upon as a fixed element, entirely adequate in any center of population. In most population centers there are wide varieties of labor types and skills, but they are not always available. It is usually true that the large centers contain a large number of unskilled laborers, but to turn them into skilled workmen requires great expense of both time and money. Even where skilled workmen are available, to build up an efficient force requires extensive search and careful selection from the mass of individuals applying for jobs.

The high cost of living in the larger centers puts a burden

of higher wage scales upon a business. This heavier labor cost may be more than a firm can finance, but inadequate wages are certain to result in dissatisfaction, in lowered efficiency, and in increasing costs.

Production is especially a technical problem. The types of equipment used largely determine the costs of operation, but the ability to secure the best equipment depends upon the financial resources of the concern. The cost of production bears most heavily, too, on the price asked for the product, and price, in turn, influences the market appeal. These elements are both cause and effect in relation to the other functions. Production of certain products, particularly in the field of textiles, may require a narrow range of temperature and humidity found in one or two regions only. In this instance, location in other areas would necessitate the installation of costly equipment.

Essential facilities, such as transportation, light, and power, develop around a well-established production center more quickly than in a less-developed territory. In these centers, also, firms that use by-products or assemble the products of several plants into a unit tend to concentrate in order to gain the advantage of small transportation cost. These considerations may favor an established center of industry even though personnel and market factors are more favorable elsewhere.

Many raw materials for production cannot be transported any great distance to a plant except at prohibitive cost. In this event the plant may have to consider proximity to raw materials as the factor which outweighs the shortcomings of the location as to finance or marketing.

Indefinite though the market for a product may be, it is the most vital factor in the operation of a business. The most desirable market territory, however, may not coincide with the area having production, personnel, and finance advantages. Market demands may call for a rapid and uninterrupted delivery of products that is impossible unless the plant is located in the midst of the market areas. This may increase equipment costs and require a more specialized training for employees. The necessity for meeting market demands is clear, but the task of arriving at the proper compromise between conflicting factors is extremely difficult.

Such approaches to the consumer as advertising, salesmen,

and display are marketing factors that cannot be determined by sales value alone. Some of these may involve costs that are beyond the capacity of a business to pay. Again, a choice must be made quite as much on grounds of financial expediency as of advertising and selling theory.

The legal form of a business depends upon the source of its financial support, ease of control, and legal liability undertaken by the owner. These factors, which vary according to the alternative business forms as well as according to the various legal jurisdictions of the forty-eight States and the Federal government, may be so great that they alone force a change of location.

The government affects business most directly with its taxation and regulation measures. Vast differences in these measures exist because of the various independent State and Federal jurisdictions. Taxes may be heavy or light in two different communities of otherwise equal attractions. No business assumes a greater tax burden than is necessary unless the offsetting features are very great. Often such offsets are not apparent, because high taxes may represent a greater number of desirable services offered by the community. For example, fire and police protection are basic factors in controlling risks of property loss.

Regulations of business by government are increasing in number and necessity. The Federal Social Security Act and the various State provisions for economic security are evidence of increased governmental regulation. In so far as regulations are discriminatory, a business needs to weigh the effect of such measures in choosing a location. For example, factory inspection laws may be so much more rigorous in some States than in others that the cost of installing new equipment or of remodeling old may be so great that a concern may feel impelled to establish itself in a State having fewer advantages in other respects.

Summary

Like all other phases of social and economic life, the course of business through the ages has been from simplicity to complexity. Notably, too, the forces responsible for this complexity have multiplied a hundredfold in the last fifty years. This, in brief, explains why business management faces so formidable a task in

the present world, and why the business career demands the best talent available.

Out of the extensive specialization of work, the scientific process, the mechanization of production, the broad expanse of the market area, and the magnitude of capital investment in business arise a great many problems that require the successful business executive to be always alert.

Of even greater importance than attention to these problems as individual matters is an understanding of the interaction of each problem upon the others. A business enterprise is a compound of many elements, each moving to produce effects upon the others. Finance, for example, is never the final factor in the enterprise, for its dependence on production and marketing to create income and yet to keep costs below income so that a profit results is exceedingly clear. Thus the interaction runs from causes within the business itself and, equally important, from causes outside, making continuous demands upon the executive to control them or to adapt his plans to them.

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PROBLEMS

1. Distinguish between *administration*, *organization*, and *management*, giving examples to illustrate each.
2. "It is essential in any of the managerial positions that the executive keep abreast of the times by careful study and observation." Study and observation of what?
3. "The modern business executive must develop a social outlook." What is a "social outlook"? Why is it essential?
4. "The function of the business manager is to produce and sell goods and services." "The function of the business manager is to administer his business in its relationship to finance, market, risk, public opinion, and technological developments." Which of these statements is more accurate?✓
5. Make a list of the *internal* business problems. The *external* ones. Which class of problems seems more difficult today? Which class was more difficult two hundred years ago?
6. Draw up a list of specific business problems that arise from the influence of (a) physical environment, (b) technological environment, (c) government, (d) public opinion, (e) competing business, and (f) facilitating business. How would your list differ if you had prepared it in eighteenth-century England?
7. "Business is greatly hampered by tradition." "Tradition is the basis of business stability." With which of these statements do you agree?
8. "The modern business executive should have at his command as much information as any of his subordinates." Is this true?
9. Show how a building program is related to personnel, marketing, finance, and production. Can you demonstrate the interrelationship of these business departments by assuming other specific business activities?
10. Your brother has been assured of a business executive position within five years after his graduation from college. Outline the course of study that you would advise him to follow. Support your outline with specific reasons.

PART II

FINANCE AND ACCOUNTING

MOTION PICTURE FILMS

FILMS FURNISHED FREE OF CHARGE

*Source: American Museum of Natural History
New York, N. Y.*

- * The Nation's Market Place (1 & 2 reels)—Method and system of transactions in stocks.

*Source: Wholesale Films Service, Inc.
48 Melrose Street
Boston, Mass.*

- * The Nation's Market Place (1 & 2 reels)—Method and system of transactions in stocks.

Source: Federal Reserve Bank of Minneapolis (for use only in Ninth Federal Reserve District).

- * † Back of Banks and Business (3 reels). Operations of a Federal reserve bank.

RENTALS

*Source: Metropolitan Motion Picture Co.
108 W. 34th St.
New York, N. Y.*

- * Modern Banking (1 reel)—Daily routine.

* Available in both 16 and 35 mm.

† Sound films.

CHAPTER III

FUNCTIONS OF FINANCE

The business enterprises of the United States now have more than 250 billion dollars invested in the land, equipment, and materials with which they operate.¹ These concerns range from the individual proprietor's store, with a \$1,000 investment; through the farmer's investment of \$20,000 in land, equipment, and animals; up to the American Telephone and Telegraph Company, with over three billion dollars invested in its communication system.² Careful management of the investments involved in the business is vitally important for all types and sizes of business enterprise.

The problem of financial management does not remain constant. Each year in the past decade the investments in American business enterprises have grown at the average rate of five billion dollars, and, as the enterprises grow, the problem of management becomes more difficult. Much of the businessman's success depends upon his wisdom in managing these capital additions so as to insure a profitable contribution to the productive powers of the business and thus indirectly to owners, workers, and the community.

American enterprises sold approximately seventy billion dollars' worth of goods and services in each year of the decade 1924-34.³ In 1929 they paid thirty billion dollars to laborers, clerks, and officials; another nine billion for raw materials; and fifteen billion for transportation, power, and supplies.⁴ This constant flow of money and credit from consumers and producers through American business concerns to laborers, clerks, officials, producers of raw materials, and many others forms a very important financial circuit. The management of this flow in each indi-

¹ *Statistical Abstract of the United States*, United States Department of Commerce, 1935, p. 268.

² *Moody's Manual of Investments: Public Utilities*, 1936, p. a37.

³ *Statistical Abstract of the United States*, 1935, p. 270.

⁴ *Ibid.*, p. 270.

vidual business and in American business as a whole is a dominating financial problem.

These financial problems are not confined to business firms alone; they exist as well for governments and for individuals. The entire subject of finance is usually divided accordingly. First, government finance is set apart from private finance. Second, private financial management is divided into the personal and the business phases. The attention here is confined to the field of business finance, but it is necessary to remember that such financial problems are bound up in the operation of the economic structure, which involves not only business but individuals and governments as well. Thus the financial system must be recognized as an integral part of the economic organization of the country.

A successful combination of all the external and internal factors in a business results in profits. It is clear, of course, that these factors are not composed of financial matters alone. The gaining of income, for example, is the result of many forces in the business—prices, styles, service, sales force, and so on. These same forces, too, are the cause for expenditures. Although we must recognize, therefore, that the problems of management are not confined to problems of finance, the results of management are tested by the financial elements. In the long run, the business must earn operating profits if capital is to be supplied to the business. This is the function of profits in the present economic system. The presence or absence of profits is therefore the chief consideration in determining whether capital will flow into or away from a business enterprise.

To facilitate this flow of capital throughout the economic structure such financial institutions as commercial banks, investment banks, and the stock exchange have developed. These institutions indeed have become the great facilitating agents of business. Since they are a part of the whole social scheme of economic organization, their operations influence and are influenced by many other parts of the economic world. The functions which they perform are serviceable not only to business but also to political units, individuals, and society. These social influences must be kept in mind as we follow the explanation of the financial system.

Credit in the Financial System

Notwithstanding that direct investment by owners is an important source of capital to all business, credit is a more important source.⁵ *Credit* is the means used to obtain goods and services *now* in exchange for a promise to pay *in the future*. Credit transactions in the American business world are estimated to account for eight out of ten business transactions. Much of the power to create credit, as well as the function of making credit available to business, rests with the various financial institutions.

Both corporations and individuals should attribute a great deal of their prosperity to the smoothness with which this credit system works. Regularity of profits and wages, security of savings, continuity of interest payments, and movement of the business cycle are all bound up in the functioning of the credit system. All parts of society, then, are dependent in some degree upon the successful functioning of the financial system.

Definitions

As one considers his own general concepts of business finance, he will recognize three distinct phases. Everyone knows that a business requires *capital*, that is, invested property, real and personal, to be used in preparing the goods or services offered for sale by the enterprise. Thus we generally regard the *capital* as the property owned by a business, and in the balance sheet statement we list capital as an asset. The day-to-day operations of a business, however, emphasize in everyone's mind the importance of gaining *income*, that is, the receipt of money or credit claims against others. Though somewhat less apparent, the business must control *expenditure*, that is, the payments for which the business is obligated. It takes no great understanding to realize that if a business is to solve the problems of raising capital and of collecting and expending income, careful plans must be laid. It is with such problems that financial management is concerned.

⁵ *Statistical Abstract of the United States*, 1935, p. 188.

R A I S I N G C A P I T A L

A business enterprise, of course, faces its financial problems as a dependent unit. It must function within the limits of business institutions, and all business and business institutions are subject to the diverse forces of the whole economic organization. With these facts in mind, an examination of the financial functions involved in a particular business can now be made. The first is recognized as that of raising capital. This task is more than one existing only at the beginning of an enterprise, for as business grows, as business volume varies, and as customers demand new products and services, a constant need is created for more capital in the business. As a consequence the problem is not disposed of once for all when the business is set up. In the case of Safeway Stores, Inc., for example, sales rose from more than 103 million dollars in 1928 to more than 340 million dollars in 1936. The original volume was handled with an asset investment of 32 million dollars, but in 1936 the capital invested was over 60 million dollars. This increase of capital came from a variety of sources through the years. The statement of 1936 as compared with that of 1928 shows an increase of 7.6 million dollars in notes payable by the company, 7 million dollars in common stock, 5.6 million dollars in preferred stock, and 5.5 million dollars in earnings retained and held in the surplus account.

Much of the capital requirement, however, is *fixed*—that is, used to provide permanent assets such as land, machinery, and office equipment. To determine the amount, to raise and to administer it, all create problems distinct from the problems of determining, raising, and administering *working* capital. The problems of these two forms of capital requirements, therefore, are treated separately in this book.

Fixed Capital

Because the necessity of providing permanent assets is the first problem confronting the executive, the acquisition of fixed capital is considered first. Before any capital is finally procured for a business, however, a series of preliminary steps are advisable. This series of steps is known as *promotion*.

Promotion

Promotion involves all the acts necessary to bring a new business idea to the point of actual operation. This work requires that the needs and purposes of the idea be visualized, tested and assembled in some tentative but concrete form, and that the enterprise be provided with capital. Without the first two steps there would be no basis or purpose to justify the seeking of money and credit. One can imagine a banker's reaction to a request for a loan if the borrower added that he had not decided definitely what use he would make of it—that he had a number of ideas in mind!

Necessity for Promotion.—Much of this task of promotion, it is true, is very poorly done; but whatever the result, it is work that has to be done if business ideas are to materialize. Someone must draw up a plan of procedure to which the tests of financial soundness can be applied. Without such a plan, supported by some tests to indicate a favorable financial result, it is inadvisable to approach other persons or firms with a request for capital. Where capital is secured without such a plan a business runs a great chance of incurring partial or complete loss, as in the case of many plant expansions in the period 1927-29. The unending record of business failures, averaging nearly 20,000 firms annually with 500 million dollars of liabilities each year from 1915-36, indicates that this matter is of great business and social importance.*

Fields of Promotion.—Although promotion may have been looked upon by some businessmen as a thing of the past, as a part of the early settlement days in this country, they must realize that the attempt to do something new need not involve radical changes in their organization. Progress may be made in a business by the mere rearrangement of the elements of a concern to meet changes in condition. The rearrangement may, for example, consist of changing the marketing organization from one of independent distributors to that of branch houses operated by the firm itself, or it may, perhaps, involve the installation of specialized machinery to offset a shortage of trained workmen. The modern business world has found in this attention to changing conditions, and the consequent required changes in the business itself, an in-

* *Statistical Abstract of the United States*, 1936, p. 294.

creasing number of the problems of financial management. Promotive efforts may bring progress into a business, in another way, by adapting scientific discoveries to the processes of commercial practice. This change may be in the nature of the raw materials used or in the equipment used. In any event it is necessary that the new or improved methods be discovered and suitably tested, and that capital be supplied for the necessary items, be they machinery or materials.

Promotion Procedure

Visualization.—The conception of a possible business idea is the starting point of all promotion. If an idea, however, is to become the basis of a new business, or of a change in an old one, it must be given some definite experimental form, so that its general feasibility may be tested. This preliminary investigation, in all probability, causes the idea to be shaped and reshaped so that its practicability is capable of demonstration. Tests are supplied by one of two usual procedures known as (1) the analogy, and (2) the "dead-reckoning" procedures. In the first, an effort is made to find an existing situation which compares definitely with the one proposed. Actual results can thus be obtained to show that the idea has soundness and to what extent it seems profitable. The second procedure involves a series of estimates by different experts in the fields of engineering and construction, accounting, and marketing. These estimates indicate the probable results if the new business or the addition to an old one were to be placed in operation.

Assembly.—When the practical phases of the business idea have been demonstrated, and if the capital can be secured, the project must be formulated; that is, the full details of the proposal must be carefully examined and prepared for actual work. In the formation of a project each of the elements in a business must be carefully prepared. The elements found in a business were classified in the preceding chapter as (1) production—plant, power, equipment, and materials and supplies; (2) personnel; (3) marketing; (4) administration and management; (5) finance; (6) legal relations; and (7) government relations. Each of these elements requires thorough examination in the light of the needs of the project. The business manager may elect in one

case to select a location where higher wages must be paid because of a compensating gain in the cheaper rates available for the large sums of required capital, while in a like situation another manager may elect the location because of its accessibility to the market.

After all the details of the proposed project have been examined and the choices have been determined, the business idea can thereafter be brought into full-fledged existence in the legal form deemed most practical for the project. The promoter will have the project outlined, with costs estimated, with the desired managers named, and with all equipment, materials, and supplies specified. Much of the success of a business rests upon the thoroughness with which these less conspicuous phases of promotion are handled at the outset.

Securing the Money and Credit.—The project being completely formulated, the final task of promotion is that of securing the money and credit for the enterprise. Two phases of this task are to be considered : the first, that of preparing the financial plan which involves the determination of the amount and kinds of securities for the project, and the second, that of selling the securities created under the financial plan.

In the preparation of the financial plan for the enterprise a careful analysis of the *costs and prospective earnings* is first made, and comparisons of this analysis with results of other similar businesses in the general field are sought. These cost-and-earning results should be studied in relation to the business cycle and to the seasonal movements of the business field. These comparisons are of importance in determining the probable regularity of the revenue and the consequent ability of the project to pay for the required capital.

The financial plan specifies kinds of securities to be issued and the amounts of each kind. The decision as to kinds and amounts is made with reference to the probable capacity of the business to pay charges upon the securities and the probable attractiveness of the securities to the purchasers of securities. The exact stipulations of the securities—covering such points as mortgage terms, preferences in stocks, time for loan payment, and a multitude of similar details—must be settled. In a well-prepared plan, these provisions are chosen, not in a perfunctory way with refer-

ence to a similar legal paper, but rather with careful regard for the special conditions of the project and the requirements or prejudices of investors. The general nature of these security contracts is examined in Chapter V.

The securities determined upon in the financial plan must finally be sold to investors and for this purpose the promoter will find two methods open: the first and usual one, a sale of the lot to investment bankers, the second and rare method, a sale direct to the public. The functioning of the investment banking system as it pertains to selling securities is discussed in Chapter VI.

After selling the securities the immediate task of raising money and credit for the permanent capital requirements of the business is finished. The operation of the formulated enterprise, however, produces a second major task in the raising of the funds necessary for the continuous working of the concern.

Operating or Working Capital

The daily functioning of a business—a factory, for example—requires that the plant equipment be fed a constant flow of raw materials. The processing of these materials before the finished article is complete and sold to the consumer requires time. The buyer may not be required to pay for it until, let us say, thirty days after purchase. No revenue during this time is immediately derived. Through this period, however, the labor has to be paid, and other regular expenditures must be made. Moreover, the pace at which these operations are performed varies from one season to another. All these facts are duplicated in any business, but somewhat less conspicuously in an insurance agency or a doctor's office. The supplying of sufficient money and credit at the time of demand to carry on the operations, and at the pace momentarily necessary, is the task every management confronts daily. The money and credit used for these purposes constitute *working capital*—capital which does not remain in the same assets permanently, but which is variable and mobile. The object is constantly to convert these assets into cash and to expend the cash for working assets so as to continue the rotation process. All this is true, of course, in any business, whether it has to do with a railroad, a newspaper, or an insurance company.

By careful estimates of income and expenditure, a substantial

portion of the working capital funds in a business can be provided from the income currently received by the business. Much of the success in doing this rests upon budgeting the current financial requirements and maintaining strong control over the capital turnover. The speed with which the materials or service are produced, sold, and paid for is called *turnover*. As indicated by the income statement of Armour & Company for 1936, the sales amounted to over five times the working capital, which was \$150,000,000. This shows that the management has guided the selling of goods, the production of new inventory, the payment of labor costs and overhead costs through a cycle that was repeated five times within the period.

That portion of the working capital which is not permanently provided by invested capital and surplus must be secured from outside sources, usually the commercial bank. Thus it is that the commercial bank system becomes so important a stone in the business structure of the country. It is through the banks' temporary credit extensions of working capital to business—evidenced, for example, by the \$23,000,000 notes payable in the Armour & Company statement—that enterprises are enabled to increase the volume of production and sales. The functioning of this part of the financial structure is developed in Chapter VII, while the instruments used for the purpose are discussed in Chapter V.

CONTROL OF INCOME AND EXPENDITURE

The remaining two functions of finance are those of regulating and controlling the income and expenditure of the business. When the capital has been supplied, the task of creating income depends, of course, on all the other divisions of the business, such as production and selling. The administration of the income, however, as a part of the working capital problem, is clearly a matter of financial management. Such problems involve the retention of sufficient cash for periodic payments of interest and dividends without endangering the capacity to meet ordinary operating costs. Perhaps the problem will be to determine whether increased inventories or credit accounts shall be permitted to absorb the income as it is produced. Such expenditures by the business as those for material and salesmen's commissions are involved in the crea-

tion of profit and are therefore matters for financial management. Some of the questions here may arise in connection with the frequency of the payments, or the amounts of the payments in relation to the length of time needed to acquire cash from the sales made.

Accounting

Accounting is the primary means to the control of income and expenditure. It is the task of the management of any business to determine policies which will produce income and yield profits. But it is the function of financial control to keep these policies under constant inspection. The facts of the business as set forth in financial statements are convenient devices used by the executives to maintain their constant inspection of financial results. When the question is raised as to the volume of sales last month, the same month last year, the cost of operation in each of those periods, the margin of profit in each of the two periods, the answer is to be found in the income statement. The statements, too, can be used to give facts as they bear on other conditions in the business—such as the co-ordination of sales with the present production schedules. Perhaps the production records show 10,000 units for each of the last two months, while sales records disclose the sale of only 8,000 units a month. Obviously this situation must be discovered and corrected. It is for these reasons that accounting has made its way to the forefront in importance as a device or aid to modern business management.

Control of Income

The control of income is inextricably bound up in the proper determination of income and the application of income. Proper determination of income is closely connected with the maintenance of capital in the business, for this problem involves such questions as the proper deductions to compensate for many losses of value—bad debts, loss of inventory values, loss through depreciation, and so on. Violation of sound policies on these points will mean a failure to maintain the capital of the business. Let us assume that the reserve for depreciation has been ignored and that most of the reported profits are distributed for a period of years. The firm may then discover when assets need replacement that it has no

funds for the financing of such a purchase and that, what is equally unfortunate, the lower property values entitle the firm to less credit with which it might finance replacements. If new assets are not acquired the firm will have fewer assets with which to produce goods. If such a course is followed for the life of the other assets, the firm would be forced to discontinue. The proper application of the income involves many questions, such as reservation of a portion to cover contingencies or to use for increasing credit extensions to customers or to disburse to the stockholders.

Control of Expenditure

The control of expenditure is the counterpart of the problem of income control, for expenditure is usually administered as a secondary phase of income. Expenditure may move with income, but not always in the same direction or at the same rate. Thus where prices of a particular commodity are marked up, the costs may also have increased and may even represent more of the total sales price than before. The steel companies claimed this to be the case when they increased prices in the spring of 1937 after the United States Steel Company entered an agreement with the steel union about wages and other matters. The existence of profits will be endangered, of course, if the expended sums are not held in check and within the limits of income. This puzzling interweaving of elements in the business and their reflection in the financial results demonstrate clearly the interdependence of the various business functions. More than this, however, they suggest the necessity for accounting to record and analyze the facts as an aid to financial as well as to all other management.

S U M M A R Y

The ramifications of finance run throughout the business, as do the influences of the other business functions in their effect upon the problems of finance. The first function of financial management is that of *raising capital*. A considerable part of this function is involved in the work of promotion—the visualization of a project, the careful testing of the idea, and the assembly of the various business factors—each step of which precedes the actual seeking of capital. The necessity of this work in promotion

for a going concern may seem less obvious when it adds a new department or a new plant than when a new enterprise is launched, but it is no less important. Financial institutions of the economic organization—among them investment banks, commercial banks, and discount houses—are relied upon extensively by business when it raises capital. A discussion of these institutions, financial instruments, and financial policies will follow, therefore, in the succeeding chapters.

The two remaining functions of finance—the *control of income* and of the *expenditure*—constitute the major problems of day-to-day financial management. This control is greatly dependent upon proper accounting. It is through accounting that business facts are made available to persons responsible for policy determination. These policies involve such questions as the amount and sources of working capital, the determination of income in relation to allowances for depreciation and bad debts, and the use of income for debt retirement and profit disbursements. The latter discussion of financial policies in the succeeding chapters directs attention to some of these problems.

While no one function in a business can be regarded as more essential than another, it is clear that finance is at the heart of it all, for in financial results all other results are reflected and the ultimate goal of profits is determined. Finance and accounting truly serve as the common denominators of business functions.

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P R O B L E M S

1. Explain how promotion may be a task of financial management in an established concern. What does promotion involve?
2. What is the distinction between the business term *capital* and the economic term *capital*? Are they reconcilable?
3. Why does "control" require a knowledge of facts?
4. Has the "promotion" of enterprise always been well done? Cite instances from history to illustrate.
5. What merit do you see in a careful "formation" of a business project? In any event, is not the pressure for haste too great to permit careful formation?
6. How do you distinguish "working" and "fixed" capital?
7. How is "revenue" a result of the work of the parts of a business concern other than finance?
8. What social importance appears to be involved in good business finance?

CHAPTER IV

FINANCIAL STATEMENTS

The financial problems of a business require that the manager constantly use a series of statements and documents especially important to financial work. The financial statements that are prepared from the records of the concern are the first of these.

The principal financial statements relied upon in the course of financial management are: (1) the balance sheet, (2) the income statement, and (3) the surplus statement. These statements are designed to serve as brief and accurate summaries of financial results and of the course or change in those financial results. As a matter of fact, however, the financial results are nothing more than a convenient way of reflecting many relationships within the business and the degree of success with which the divisions of the business are functioning. Such statements are important in all business as a basis for facts, without which a manager cannot efficiently determine his future course of action.

Accounting, which is regarded as the science of recording, classifying, and summarizing the financial data of a business, assumes great importance, therefore, in all business. It is from accounting statements that a manager interprets the course of financial results and other business facts in the firm. The financial results are of interest likewise to the banker who is asked to extend credit, to the merchant who is asked to grant book credit to the firm, and to the investors who purchase the securities of the business.

BALANCE SHEET

General Nature

The balance sheet of a firm is a statement as of a particular date of the amounts of the assets (or property owned) and the liabilities (or claims owed) in monetary terms. The statement is based upon the cumulative records. In other words, the statement

shows the summarized facts of assets and liabilities as they have occurred in the past, not as they might be predicted for the future. The general theory of a balance sheet is that it shall show the values in the property owned by the business, which shall be exactly offset by the liabilities, invested capital, and surplus, representing the sources from which the assets were acquired.

Even in the best-constructed balance sheets, the values stated are, to a great degree, matters of opinion. For example, the acquisition cost of a plant may far exceed the cost of the plant were it reconstructed after a period of falling prices; that is to say, the value is much less than the original cost. This cost value, however, is usually the proper value to show on the statement. If the accountant continuously changes the balance sheet values in accordance with changing price levels, it would be impossible to make a comparison between the balance sheet statement of one year with that of another. Services rendered to a firm, particularly at the time of its establishment for promotion and organization work, are often classed as assets to the firm; yet such items are very difficult to evaluate. Because losses in the value of the assets through depreciation and other conditions can only be estimated, the remaining values as set down certainly are matters of opinion. These estimates are ordinarily shown along with the original costs. The balance sheet is the summarized result of the business life on the date stated, with estimates of loss in values indicated in the special accounts for that purpose. See the statement of Armour & Company, Figure 4, as an illustration of the general appearance, together with the divisions, of a balance sheet.

Assets

A broad division is always made in the assets of a business between what are known as fixed and current assets. The line of difference is drawn in reference to the character of the asset and the time during which it is retained by the business.

Fixed Assets.—Fixed assets are regarded as all those items which are in such form as to be permanently used in the business. The chief examples of fixed assets are (1) factory or store building, (2) machinery, and (3) fixtures. In the construction of a

balance sheet it is the practice to list assets on the left-hand side or at the top of the sheet.¹

Current Assets.—Current assets comprise those items that are regularly prepared for sale, cash, and promises to pay cash by debtors of the business. The principal types of assets in this division are (1) materials for processing, (2) finished goods, (3) notes and accounts receivable, (4) cash, and (5) marketable securities. As the name suggests, these assets are in the course of constant change in amounts and kinds while the business is in operation. This division of the balance sheet, like the fixed assets division, carries a total footing of the values in the group, so that the portion of all the assets distributed to each class is apparent at a glance.²

The distribution between the two classes of assets obviously varies in different fields of business. In a public utility furnishing electricity, for example, the fixed assets comprise the largest part of all the assets, since the product sold is an invisible and intangible one, almost wholly a result of a process of mechanics. A recent balance sheet of Pacific Gas & Electric Company shows plant assets at 660 million dollars and current assets at 35 million dollars. On the other hand, a general merchandising store has the largest part of its assets in its stock of goods, or inventory, accounts receivable from customers, and cash for purchasing goods and making wage payments. The recent statement of J. C. Penney Company carried fixed assets at 9.9 million dollars and current assets at 65.8 million dollars.

Policies on Statement of Assets

Accountancy and finance have developed a well-defined standard for the construction of a balance sheet in respect to making the statement of the assets. In the case of fixed assets, the values should always be stated in terms of cost to the business, for it is this cost for which the business has to account and which is the basis of all overhead charges. If the costs are not definitely related to the original values invested the business may fail to recover in the prices charged a correct portion of the values so

¹ See Fig. 2.

² See Fig. 2.

committed. This failure usually leads to but one end—the financial failure of the concern.

Anticipated Values.—Fixed assets should not include values that were never actually purchased. To include them would make it appear that the firm possessed property that it might use or that it could sell to meet its outstanding obligations. Price increases of assets owned by the business, for example, should not be reflected in the balance sheet until the assets are actually sold at the advanced prices. Good will as a measure of the ability to earn more than the usual rate of earnings should not appear in accounts unless it is purchased. To deviate from this policy permits the insertion of many claims to asset values of a concern, and gives rise to an entirely misleading statement of the assets.

Loss of Values.—Because most fixed assets are subject to losses from aging and from use, it is apparent that these losses should be recognized in the statements of the balance sheet by an estimate of the amount of such allowance. The statement of the amount of the allowance should always be made, since this is one of the items about which opinions vary widely. A better way, therefore, is to state exactly the values deducted for each period of time so that the readers may judge for themselves.⁸ This total accumulated deduction is usually shown as a subtraction from the total asset cost, or as a reserve account for such losses on the liability side of the balance sheet.

Current Asset Values.—Good policy dictates that the values of current assets be stated either in cost or in market price, whichever is lower. This policy deviates from that for fixed assets because current assets are of use to the concern only at the current price. These assets are ultimately to be turned into cash; hence the lower value represents the assets at the most likely realizable values. Insertion of the current assets at higher values amounts to crediting the firm with profits before they are realized—a procedure that is always considered a poor policy.

A large portion of the current assets is often in the item of accounts and notes receivable running over varying periods of

⁸ See Fig. 2.

time. An accurate statement, therefore, classifies the items by periodical due dates, ordinarily in a supporting schedule. The balance sheet thus discloses when such accounts may be relied upon to become available revenue to the business. Allowance for nonpayment should be consistently made. A statement of the amount should be included in order that there be no doubt that this allowance had been made and in order that others might check its adequacy.

CENTRAL COMPANY, INC.

BALANCE SHEET

DECEMBER 31, 1936

CURRENT ASSETS

Materials *	.....	\$30,000.00
Finished Goods *	.....	10,000.00
Accounts Receivable		
30 days	\$10,500.00	
60 days	10,500.00	
	<hr/>	
	21,000.00	
Less: Reserve		
for Bad Debts	1,000.00	20,000.00
Cash		<hr/>
		10,000.00
Total current assets		\$70,000.00

FIXED ASSETS

Land and buildings	60,000.00	
Less: Reserve		
for depreciation	10,000.00	50,000.00
Equipment and		
Fixtures	35,000.00	
Less: Reserve		
for depreciation	7,000.00	28,000.00
Total fixed assets		78,000.00
	<hr/>	
		\$148,000.00

* At cost or market, whichever is lower.

FIG. 2.—Sample balance sheet—asset division.

Liabilities

We find that the assets of the business are balanced by the liabilities, invested capital, and surplus. These are terms which classify the way in which the assets have been acquired.

Fixed Liabilities.—Fixed liabilities are those debts of the firm which it is pledged to repay after a long period of time from the date of the creation of the liability, and upon which interest must usually be paid. These liabilities consist chiefly of notes and bonds, both secured and unsecured. There is a very definite relation between this class of fixed liabilities and that of fixed assets, for both are of a nature involving a long period of time. Good policy suggests that whenever fixed assets are acquired through the creation of debt, the debt should be of the fixed liability class; in other words, it should be correlated to the time which it will take to derive the benefits from the corresponding asset.

Current Liabilities.—Current liabilities are those debts which must be repaid within a short period after their creation: accounts payable in 30-60 days, notes payable in 30-180 days, and wages accrued. Much of the working capital, as it is temporarily needed, is acquired by the creation of these current liabilities. These liabilities are therefore closely connected with the current asset classification. It is through an increase of current liabilities that the current assets are usually increased; in a going concern it is from the current assets that these current liabilities have ordinarily to be discharged. This is a circuit that must be constantly flowing. For this reason the danger of placing in fixed assets the funds which the business has derived through its current liabilities is obvious.

Policies on Statements of Liabilities

In the statement of liabilities there is one general policy to be regarded—the notation of maturities on fixed debts and a classification of the current debts by due dates so that they may be accurately compared with the current assets. Any contingent liabilities should appear in the footnotes.

A comparison between the total footings of the current liabilities and of the current assets is expressed in a ratio. In the

case given in Figure 3 there are \$35,000 in current liabilities and \$70,000 in current assets; hence the ratio is 2 to 1, which is known as the current ratio. The ratio tends to indicate the ability of the

CENTRAL COMPANY, INC.

BALANCE SHEET DECEMBER 31, 1936

CURRENT LIABILITIES

Accounts Payable	\$15,000.00
Notes Payable	15,000.00
Wages Accrued	<u>5,000.00</u>
Total Current Liabilities	\$35,000.00

FIXED LIABILITIES

First Mortgage Bonds	
5% due 1945	20,000.00
Gold Notes	
6% due 1940	<u>10,000.00</u>
Total Fixed Liabilities	30,000.00

CAPITAL STOCK

Common stock—\$100 par	60,000.00
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SURPLUS

Undivided Surplus	10,000.00
Appropriated Surplus	
Contributed ..\$ 3,000.00	
Earned <u>10,000.00</u>	<u>13,000.00</u>
	<u>23,000.00</u>
	<u>\$148,000.00</u>

FIG. 3.—Sample balance sheet—liability division.

business to discharge its current debts. To be used accurately, however, the elements of the current ratio must be examined for the relation between the amounts of current assets available at the various dates when current liabilities are due. In addition, fixed liabilities with due dates falling within the current period must be treated as current liabilities. Moreover, not all current assets are available for payment upon the liabilities as the current ratio im-

plies. In the case presented, which has a current ratio of 2 to 1, most of the current assets are represented by the inventory of \$40,000. This value, of course, may shrink by reason of lowered prices. It would be necessary, in any case, that a considerable part of this inventory be sold; otherwise after thirty days the firm would probably have reduced its cash to a minimum.

Invested Capital

The invested capital of a business consists of the values paid into it by the owner. Invested capital of an owner is represented on the balance sheet by the capital stock, in the case of a corporation; and by the proprietorship division, in the case of a partnership or individual enterprise.

Capital stock is entered upon the balance sheet according to class of stock—par or no-par. Par value stock carries a monetary face value, and it is entered on the balance sheet at that figure, multiplied by the number of units issued. By multiplying the total figure of 600 shares issued by \$100 par value, there results a total of \$60,000 capital stock issued by the corporation. The quantity of this stock remains stable, except for new shares issued, without regard to the course of values in the assets.⁴

No-par value stock is entered by the mere notation of the number of shares issued.⁵ The amount received for the stock is often indicated, but practice differs as to the extension of the amount to indicate that a value is being given the stock. To illustrate these practices, one may contrast the statement of Armour & Company, Figure 4, with the balance sheet statement of the United Fruit Company.

Proprietorship accounts are shown in the statement of values

⁴ Par value stock is sometimes the only type of stock permitted by the incorporation laws. When there is a choice it is often influenced by such considerations as (1) the psychological value of the par figure in selling; (2) the fact that par value lends itself more readily to accounting checks; (3) a means of avoiding burdensome taxes which in some cases fall on no-par shares; and (4) the fact that it permits easy computation of dividend rates and yields, and so on.

⁵ No-par stock may be used to avoid certain stock liability under the trust-fund theory applied to par value stock. Then, too, stockholders have no reason to rely on particular values as the price they should or should not pay. Moreover, the stock lends itself to issuance for promoter's services and other intangibles frequently acquired with stock.

AN INTRODUCTION TO BUSINESS
ARMOUR AND COMPANY

CONSOLIDATED BALANCE SHEET—OCTOBER 31, 1936

ASSETS			
CURRENT ASSETS:			
Cash		\$ 12,263,163.68	
Notes Receivable—Trade	\$ 1,150,550.71		
Accounts Receivable—Trade	<u>34,859,683.24</u>		
	36,010,233.95		
Reserve for doubtful notes and ac- counts receivable—Trade	878,992.20	35,131,241.75	
Notes Receivable—Other	2,017,879.38		
Reserve for doubtful notes receivable —Other	<u>95,087.20</u>	1,922,792.18	
Inventories—Packing house products, on the basis of market less allow- ance for selling expenses. Other products and supplies at cost or market, whichever is lower:			
Products	95,378,245.65		
Supplies	<u>8,026,023.59</u>	103,404,269.24	\$152,721,466.85
Intercompany Current Accounts Re- able—			
Subsidiaries not consolidated (covered by net current assets of such subsidiaries)			718,984.80
Total Current Assets			<u>153,440,451.65</u>
INVESTMENT STOCKS, BONDS AND ADVANCES (See Schedule)			
FIXED ASSETS:			
Land, Buildings, Machinery and Fixed Equipment—Illinois Com- pany and Subsidiaries (exclusive of Delaware group)		57,179,635.69	
At cost, less adjustments of cer- tain property values in 1934. Delaware Company and Subdi- visions			122,338,497.84
At acquisition values from Ar- mour and Company (an Illi- nois corporation) in Decem- ber, 1922, plus additions since at cost, less adjust- ments of certain property values in 1934.			<u>179,518,133.53</u>
Reserve for depreciation after giving effect to adjustments of certain property values in 1934		<u>42,572,421.63</u>	
Refrigerator Cars, Delivery Equip- ment, Tools, etc.—At cost less ac- crued depreciation		136,945,711.90	
		<u>12,526,482.19</u>	149,472,194.09
GOODWILL—less amortization			1,130,686.03
DEFERRED CHARGES:			
Insurance unexpired		918,893.02	
Taxes and other prepaid or deferred items		<u>633,934.72</u>	
		1,552,827.74	
Debt Discount and Expense—attach- ing to outstanding issues—being amortized		<u>2,762,090.49</u>	4,314,918.23
			<u>\$323,431.840.14</u>

FINANCIAL STATEMENTS

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LIABILITIES

CURRENT LIABILITIES:

Notes Payable—			
Banks and Brokers	\$18,926,563.03		
Acceptances	4,412,454.24		
Other	117,500.00		
Accounts Payable			\$23,456,517.27
Accrued Liabilities—			
Payrolls	1,125,975.98		
Interest on funded debt and other interest	1,110,545.85		2,236,521.83
Reserve for Federal Income Taxes ..			4,104,741.86
Reserve for General Taxes			3,192,904.49
Sinking Fund requirement in respect of Armour and Company of Dela- ware First Mortgage Twenty-Year 4% Sinking Fund Bonds, Series B, payable on June 20, 1937 (calcu- lated at principal amount of bonds to be retired)			498,500.00
Total Current Liabilities			<u>41,149,232.26</u>

RESERVES:

For Contingencies—

Balance November 2, 1935	4,000,000.00		
Less—Portion of additional Fed- eral income taxes and interest and expenses thereon in con- nection with settlement of Fed- eral income taxes for years to and including 1932			
	<u>1,500,000.00</u>		
	<u>2,500,000.00</u>		
Balance of accrual of processing taxes as of November 2, 1935, carried in suspense pending final determination as to disposition	<u>8,149,176.57</u>		<u>10,649,176.57</u>

LONG-TERM DEBT:

Funded Debt—

Armour and Company (an Illinois corporation) Real Estate First Mortgage 4½% Thirty-Year Gold Bonds, due June 1, 1939			
		27,813,000.00	
Armour and Company of Delaware First Mortgage Twenty-Year 4% Sinking Fund Bonds, Series B, due August 1, 1955.....			
Less—Amount transferred to Current Liabilities	\$47,520,000.00		
		<u>498,500.00</u>	<u>47,021,500.00</u>
Morris & Company First Mortgage Sinking Fund 4½% Gold Bonds due July 1, 1939 (called for re- demption as at January 1, 1937 at 103% plus accrued interest)— principal amount			
		<u>8,390,000.00</u>	<u>83,224,500.00</u>

MINORITY STOCKHOLDERS' EQUITY IN SUBSIDIARIES CONSOLIDATED:

Capital Stock	898,816.70		
Accumulated Deficit	201,570.62		697,246.08

CAPITAL STOCK AND SURPLUS:

Capital Stock—Armour and Company of Delaware Guaranteed 7% Cumulative Preferred Stock—Par value \$100.00 per share—	
Authorized—928,643 shares	
Outstanding—570,799 shares....	57,079,900.00
Armour and Company (an Illinois corporation)—\$6 Cumulative Convertible Prior Preferred Stock—No par value—(stated value \$100.00 per share)—	
Authorized—572,313 shares	
Outstanding—532,970 shares ...	53,297,000.00
7% Cumulative Preferred Stock—Par value \$100.00 per share—	
Authorized—571,703 shares	
Outstanding—38,733 shares ...	3,873,300.00
(The accrued and unpaid dividends at October 1, 1936 aggregated \$1,210,406.25—\$31.25 per share. On December 18, 1936, the Directors declared a dividend on this issue payable January 15, 1937, covering all arrears to date.)	
Common Stock—Par value \$5.00 per share—	
Authorized—7,578,504 shares	
Outstanding—4,065,940 shares..	20,329.00.00
Common Stock reserved for issuance to holders of Illinois 7% Preferred Stock upon exchange for \$6 Prior Preferred Stock and Common Stock	
	387,330.00
Surplus—	35,424,470.36
Capital and Paid-in Surplus	
Appropriated Earned Surplus (representing segregation of Surplus required in connection with (a) Sinking Fund retirements of Armour and Company of Delaware Preferred Stock and (b) investment in Armour and Company (an Illinois corporation) 7% Preferred Stock)	6,036,574.25
Unappropriated Earned Surplus ...	<u>11,283,410.62</u>
	<u>52,744,455.23</u>
	<u>\$187,711,685.23</u>
	<u>\$323,431,840.14</u>

FIG. 4.—A balance sheet of an important business firm. Note the construction in conformity with the points made in the text.

turned over to the business by the owner. No change in the proprietorship item should be made as the values in the assets vary, for it is desirable to have a constant figure of the amount the owner committed to the business. Any variations in values that are realized can best be recorded in the surplus entry.

Surplus

A considerable portion of the values in a business is not accounted for in the liability and invested capital divisions. This excess of assets in the total value is known as surplus.

In constructing a balance sheet there is a common temptation to write up assets at values in excess of costs and to maintain the balance of the statement by increasing the surplus by an equal amount. To make such statements of asset values is not only misleading to investors but it is also a poor policy, for by the alteration of the surplus entry improper statements of asset values are easily concealed. Failure to adhere to the standard of stating assets at cost is made more serious by this easy method of concealment.

It is commonly, though mistakenly, believed that surplus is represented by cash. Unless there has been a very definite plan to reduce and segregate such an amount of cash, surplus is a mere excess of total asset values above the values owed. Thus surplus is no indication of the ease with which a firm may meet obligations or finance various projects. As the earnings are made from year to year and accumulated in surplus, the revenue probably is expended for added quantities of inventory, credit accounts, and machinery for the plant. Although all these items continue to show in the assets as values within the business, they have no special connection with the surplus account. The added values, however, do make for greater asset values, and thereby increase the excess values over liabilities. The surplus is thus increased, but it is already invested.

INCOME STATEMENT

General Nature

The second statement of importance used in the financial work of the business is the income statement. The income statement seeks to show, over a short period, a running picture of the sources of revenue and the expenses incurred to gain such revenue. The statement, as in Figure 5, shows first the sales, that is, the total price received for all regular items sold for both cash and

credit. Nonoperating revenue is not included in this figure. It is accounted for at a later point.

The second entry is that of cost of goods sold. This amount is deducted from the sales figure first stated. The cost of goods—\$140,000 in the sample case—represents the cumulative costs of the inventory, wages for direct labor, and costs of power, supplies, and light for the plant. The difference of \$60,000 between the sales and cost of goods sold is labeled gross profits. Both the result and the costs deducted are compared in percentage terms to the first figure, sales. Thus, in the case of \$400,000 in sales and \$280,000 in cost of goods as shown in the income statement, Figure 5, the latter in relation to the former is 70 per cent of sales.

A deduction from the gross profits is then entered. It consists of two general parts, one known as *selling expenses* and the other as *administrative expenses*. The selling expenses, \$20,000 in amount, include such items as advertising, salaries and commissions paid salesmen, and traveling expenses. The administrative expenses, totaling \$10,000 in this case, include such items as salaries of officials and general clerical force, cost of office supplies, miscellaneous office expenses, and allowance for bad debts. The amount remaining after this deduction is known as the *operating profit*. The expense groups and operating profit are compared to the sales amount in percentage terms as in the illustration.

Operating Ratio

When the cost of the goods plus expenses is compared with the amount of sales, the resulting percentage is known as the *operating ratio*. The ratio is computed by dividing the total of operating expenses by the amount of sales, the percentage result in the sample case being 85 per cent.⁶ One readily sees that eighty-five cents is spent to gain each dollar of revenue for the firm. This percentage statement, together with all the other comparisons, is an important index to current profit results of the concern. The operating ratio is frequently looked upon as a test of the efficiency of the management, and one of the first tasks of the management

⁶ See Fig. 5.

is to keep this figure close to a predetermined normal for the firm. Certainly it must be kept, if at all possible, from mounting to 100 per cent.

Operating ratios vary considerably between the different classes of business enterprises. In the merchandising field, this ratio runs between 85 and 94 per cent, since the goods sold and selling services are the chief elements of the business. The ratio in the 1936 report of F. W. Woolworth Company is 89.7 per cent. The ratio for an electric light and power producing utility ranges from 40 to 65 per cent because this class of business has a heavy investment in machinery and pays proportionately less for labor and materials to create the electricity. A typical case is the 1936 statement of the Union Electric Light & Power Company where the ratio shown is 45 per cent.

Capital Charges

The income statement at this point, however, does not show net profit, since we have yet to account for all the capital charges. The first of these charges is depreciation, which represents the fractional part of the permanent asset value that is regularly lost through age, use, and decreased efficiency. This deduction of \$5,400 in the illustrative case is necessary in the computation of profits, for if it is not recovered in the existing margin of profit, there is no reserve value in the business out of which the old assets can be refinanced and replaced. The basic figure from which this deduction is made is usually the cost of the property and the number of years of life estimated for it. Thus it is apparent that depreciation varies greatly according to the nature of the asset. Some properties depreciate at an extremely rapid rate while others lose value very slowly. Where the rate of depreciation becomes so high as to involve only a year or two, many firms prefer to regard the costs as direct operating costs and therefore enter the expenditure for the new items in their capital or asset accounts. Such a case is that of the automobile concerns, which charge to current operations the cost of patterns, tools, and equipment for a new model. Taxes, exclusive of income taxes, are the second regular charge to be accounted for at this point. These tax payments to the government are a fixed lien upon the business and therefore should be treated as a prior charge.

After taxes and depreciation have been deducted account must be taken of the interest payments due on borrowed capital.⁷ Depreciation is regarded as a charge prior to interest because if the firm is to continue over a long period to pay interest it must be equipped with the necessary permanent assets. Such replenishments of the permanent assets will be made possible through the depreciation deduction or reservation of income. This assumes, of course, the proper management of such a reserve. Under the opposite course the interest would be paid out of the capital invested until the whole financial structure collapsed. The bankruptcy of the New York, New Haven, and Hartford Railroad affords an example of the violation of such policies.

Financial Ratio

The amount required to pay the interest on all debts of the concern, compared to the amount of income available to pay such interest, is known as the *financial ratio*. To determine it the interest charges are divided by the amount available to pay such charges. If this ratio were 7 per cent, as shown in the illustration, it reveals that seven cents out of each dollar available is required to pay the interest charges. The ratio also indicates that the amount available for interest could shrink 93 per cent before the ability to pay the interest would be destroyed. This latter figure is also known as the *margin of safety*. Where a firm has several debt and stock securities, a computation after payments for prior securities are deducted permits a comparison of the available earnings with the charges on the particular security. This ratio is known as the *factor of safety* of that security.

The financial ratio in one kind of business differs from that in another. Since an electric light and power firm, for example, finds that it needs large amounts of fixed assets for which a large share of money is borrowed, the ratio commonly runs between 30 and 50 per cent, as you may find in the case of Southern California Edison Company, where the ratio is 40 per cent. A merchandising firm, on the other hand, because of wide variations in its sales, avoids large interest payments; thus its financial ratio commonly ranges between 5 and 15 per cent. The W. T. Grant

⁷ See Fig. 5.

Company reports interest at 5.2 per cent of the available income.

At this point account is taken of additional income and expenses of the firm that arise from sources other than its regular operations, such as income on investment in other concerns. The

CENTRAL COMPANY, INC.
INCOME STATEMENT
FOR YEAR ENDING DECEMBER 31, 1936

		Per Cent of Sales
Sales	\$200,000.00	100
Less : Cost of Goods	140,000.00	70
Gross Margin	60,000.00	30
Less : Selling Expenses	20,000.00	10
(Salesmen's commissions, advertising)	<hr/>	
	40,000.00	
Less : Administrative Expenses	10,000.00	5
(Clerks, officials' salaries, bad debts)	<hr/>	
Gross Profit from Operations	30,000.00	
Less : Reserve for Depreciation	5,400.00	
	<hr/>	
	24,600.00	
Less : Taxes (except income taxes)	2,000.00	
	<hr/>	
Net Profits from Operations	22,600.00	12
Less : Interest	1,600.00	
	<hr/>	
Operating Income after Charges	21,000.00	10.5
Add : Other Income (interest received)....	200.00	
	<hr/>	
Net Profit for the Period	<u><u>\$21,200.00</u></u>	10.6

FIG. 5.—Sample income statement.

1936 report of the Curtis Publishing Company shows \$22,107,739 held by the company as investments on which the company received \$1,171,380 nonoperating income.⁸ The resulting figure at this point in the income statement is the net profit for the year. Discussion of additional income has been postponed to this point because it is recognized that a business ordinarily relies upon its

⁸ See Fig. 7.

regular operating income as the basis for its financial plan. Because of their irregularity such extra income items cannot be properly regarded as a basis for testing the ability to pay interest charges or to make proper allowance for depreciation. Furthermore, investment forms a different problem from that of operation. The results of the two should be kept distinct so that the sources of the profits will be clear to anyone interested in the concern.

SURPLUS STATEMENT

Nature of Net Profits

The net profits as shown by the income statement are carried into the surplus statement. These net profits are not necessarily

CENTRAL COMPANY, INC. STATEMENT OF SURPLUS DECEMBER 31, 1936

Balance, Jan. 1, 1936		\$10,000.00
Earned surplus	\$5,000.00	
Contributed surplus	<u>5,000.00</u>	
Add: Net Profit for the year	21,200.00	
Sale of equipment	<u>200.00</u>	21,400.00
		<u>31,400.00</u>
Deduct:		
Fire loss in excess of insurance ...	2,400.00	
Dividends, 10 per cent	<u>6,000.00</u>	8,400.00
Balance, Dec. 31, 1936		<u>\$23,000.00</u>
Distributed as follows:		
Appropriated	13,000.00	
Unappropriated	<u>10,000.00</u>	

FIG. 6.—Sample surplus statement.

represented by cash. The profits are represented by the excess of asset values over liabilities that have come into the business in the preceding period of operation. The increase in the net assets over the period—the profits—may have been used to reduce bank loans, to reduce accounts payable, or to increase a line of profitable

inventory. Thus it is unsafe to conclude that the profits of a concern represent a growth in the cash account. It is seldom that the concern finds it wise to draw off its profits into an idle cash account; often, indeed, it finds this impossible.

Form of the Statement

The surplus statement shows the changes in the surplus from the time of one balance sheet to another and includes a classification of the sources of the surplus. The statement originates with the total surplus of the last period, with subdivisions showing paid-in capital and earned surplus. In the example, Figure 6, the statement shows \$10,000 carried from the last balance sheet, the subdivision showing \$5,000 derived from earnings and \$5,000 from premiums paid by stockholders. The net profits of the 1936 period, as shown by the statement, Figure 6, is carried forward and added to the former surplus, together with additions to surplus from other sources. The illustrative statement shows a special

THE CURTIS PUBLISHING COMPANY

CONSOLIDATED INCOME AND EXPENSE ACCOUNT—YEAR 1935

INCOME—OPERATING:

	1935
Revenue from Advertising, Circulation, etc.	\$31,829,184.81
Miscellaneous	86,701.07
Non-Recurring Items	<u>156,175.51</u>
	<u>32,072,061.39</u>

EXPENSES—OPERATING:

Production and Delivery	17,570,018.73
Selling	7,676,198.99
Administration	444,896.50
General and Miscellaneous	163,504.74
Non-Recurring Items	<u>36,738.25</u>
	<u>25,891,357.21</u>

Balance	6,180,704.18
---------------	--------------

Depreciation on Plant, Fixtures and Buildings	684,792.78
Provision for Federal, State and City Taxes	<u>1,330,832.31</u>
	<u>2,015,625.09</u>

Balance	4,165,079.00
---------------	--------------

OTHER INCOME:

Income from General Investments	1,160,952.97
Dividends on Company's own stock	246,918.00
Credits through cancellation of Employees' Stock Purchase Agreements ..	3,829.00
	<u>1,411,690.97</u>

Total Earnings	\$5,576,779.06
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AN INTRODUCTION TO BUSINESS
 CONSOLIDATED ANALYSIS OF SURPLUS
 of
THE FAIRMONT CREAMERY COMPANY
 (of Delaware)
 AND SUBSIDIARY CORPORATIONS
 FEBRUARY 28, 1935 TO FEBRUARY 29, 1936

EARNED SURPLUS:

Balance, February 28, 1935	\$1,748,708.72
----------------------------------	----------------

Add:

Net Operating Profit, Year Ended	
February 29, 1936	\$846,572.27
Net Reduction of Sinking Fund	
Reserve	3,289.00
Excessive Reserve for Prior Years	
Federal Income Taxes	14,553.41
	<hr/>
	864,414.68
	<hr/>
	2,613,123.40

Deduct:

Dividends Paid in Cash:	
Common	\$420,571.25
Preferred	<u>202,588.33</u>
	<hr/>
623,159.58	
Stock Dividend (Common, 1935) .	<u>165,378.80</u>
	<hr/>
788,538.38	
Reserve for Federal Income Taxes,	
Year Ended February 29, 1936	<u>129,490.33</u>
	<hr/>
	918,028.71
Balance, February 29, 1936	<hr/> <u>\$1,695,094.69</u>

CAPITAL SURPLUS:

Balance, February 28, 1935	748,096.90
----------------------------------	------------

Deduct:

Adjustment of Premiums on Capi-	
tal Stock	<u>2,498.07</u>
Balance, February 29, 1936	<hr/> <u>745,598.83</u>
TOTAL EARNED AND CAPITAL SURPLUS, FEBRUARY 29, 1936.....	<hr/> <u>\$2,440,693.52</u>

FIG. 7.—An income account and a surplus statement from two prominent firms. Note the construction in conformity with the discussion in the text.

addition to surplus of \$200 from a profitable sale of equipment. The list of deductions for the period which follows include charges for loss of building by fire in excess of the insurance coverage, write-off of patent assets in the period, and loss in the sale of a permanent asset. A fire loss of \$2,400 is shown in the example. In addition the dividends of \$6,000 are shown as a deduction, leaving a balance of \$23,000 in the surplus at the end of the 1936 period.

The special deductions are made in the surplus statement

rather than in the income account because the deductions are capital transactions—not income transactions—of the last period. The illustration shows that the firm has divided its surplus into two definite accounts. The account called Appropriated Surplus has been created by the executives to show that \$13,000 of the surplus is reserved for the purposes of expansion and of replacing inefficient assets. This earmarking is done to indicate that the executives consider \$13,000 of the surplus as unavailable for dividends.

S U M M A R Y

The financial statements are among the most important products of accounting. These statements are essential as guideposts for the manager, the investor, the banker, and the trade associates of the firm. Such statements aid in judging the financial results of the business. The interested parties have slightly different points of view, but for all of them the essential facts are embodied in the statements.

From detailed statements the executive seeks the comparisons of all the essential financial facts of the business. The comparisons not only involve the past and present results of the leading concerns in the same field but the results within the business as well. Moreover, they call attention to situations in the business which require explanation.

The *balance sheet* is used as a historical summary of the financial results from period to period. It involves a great deal of opinion concerning the exact values shown, for many estimates of loss and for reserves are matters of judgment. The *income statement* is created to show the sources of the income and the costs of operating the business, and to explain the increase or decrease in the net asset values of the business. A careful distinction is made between operating costs and capital costs so as to permit judgment of operative and capital plans separately. The *surplus statement* is used to show the sources of the surplus, the unusual income and costs of the period, the allowance of dividends or profit withdrawals, and the uses to which the surplus may have been assigned.

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Articles

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P R O B L E M S

1. How can you tell whether a businessman has too much or too little capital? What are the disadvantages of having too little capital?
2. Why make a distinction in financial management between capital, revenue, and expenditure? Between operating and nonoperating revenue?
3. What is regarded as the proper base for evaluating fixed assets; current assets? Why? What is the current ratio?
4. Is surplus available for financing expansion? If a profit is made in the period, what changes will surplus show? Would this be true if no Profit and Loss statement were prepared?
5. Why are financial statements regarded as opinions? As important?

6. (a) If a profit is made in a period, what change will result in assets, debt liabilities, capital stock, and surplus?
(b) Is surplus available for financing a new building? Explain.
7. Explain briefly: margin of safety, operating ratio, financial ratio, and income.
8. Why do ratios seem to be important in financial comparisons? May they be misleading?
9. Is anyone interested in financial statements other than the managers themselves? Is there any relationship between this question and the growth of the public accounting profession?
10. What difference, if any, is made in the case of a concern which starts the income account with income from all sources, and deducts depreciation as the last entry?

CHAPTER V

FINANCIAL INSTRUMENTS

A second general class of documents to be used in the financial operations of a business is made up of the financial instruments or contracts themselves. These instruments may be grouped by reference to the object for which they are employed—the raising of fixed or working capital.

INSTRUMENTS FOR FIXED CAPITAL

In the group of instruments used for raising fixed capital, stock issued by a corporation is among the first in importance. There is no instrument of this nature representing the individual's interest in a proprietorship because no contractual relation exists between the owner and his business. In the case of a partnership there is a contract of partnership either prepared by the parties or implied by the law, but it exists as a strictly personal relationship. Thus, since corporate stock represents a distinct financial instrument, it deserves special study.

Corporate Stock

We may classify kinds of stock to be (1) regular stock—those contracts which assure the rights *generally granted by common law and no more*; and (2) stock with variations—those contracts which assure some right or *rights specifically stated in the contract* (statutes, charter, by-laws, or certificate) but which on all points not specifically provided for preserve also the rights of regular stock.

Regular Stock.—Stock in a corporation is, first of all, a contract between the holder and the corporation that issues it. This contract may provide any arrangement of rights and liabilities, unless prohibited by law, to which the parties may consent. The stockholder gives his consent, of course, by purchase of the stock.

Many contracts for stock contain no expressed stipulations. Some contain agreements on some points and not on others. The rights granted by the contract, unless otherwise expressed, are drawn from the principles of the common law of corporations.

The fundamental rights given by the common law to the holder of stock include the following privileges:¹ (1) In the stockholders' meeting the holders have one vote for each share held. At this meeting the election of directors, the enactment of by-laws, and the passing upon the sale or mortgaging of the entire assets of the corporation comprise the business. (2) The stock contracts entitle the holders to participate proportionately on their shares in the profits, whenever the directors in their discretion vote to declare dividends out of such profits. Likewise the stock owners share proportionately in the remaining assets upon dissolution. (3) The contract grants the holder the right to transfer his share freely, to inspect the books of the company under reasonable circumstances, and to require the corporation to engage only in those activities for which it was chartered.

The stock grants the corporation the right to force the holder to pay the price agreed upon as the subscription price, for which the corporation has a lien on the stock. The corporation is never obligated to return the price paid by the holder, except in liquidation, and it may use the amounts received on the stock for any chartered purpose. There is no obligation to pay out profits, even though they exist, except as the directors vote to make such payment. Existing profits may be retained within the business upon order of the directors for use in any of its operations.

Stocks with Variations.—By variation of the general contract rights another class of stock contracts may be created. Though it should be kept in mind that titles are never an assurance of actual provisions, stocks with variations may be classified briefly under the following titles: preferred, prior lien, participating, and classified common.

Preferred stock usually carries the contractual stipulation granting a priority of a stated rate of dividend over some other class of stock. Often this stock includes the stipulation that upon dissolution or liquidation of the concern a full distribution of pay-

¹ These rights may be changed by the corporation laws, charter, or by-laws.

ments shall be made on this stock before any shall be made on some other class of stock. The 6 per cent cumulative preferred stock of the Detroit City Gas Company provides for preference both as to assets and dividends, being entitled to a hundred dollars per share in the event of liquidation. There is no voting power in the Detroit City Gas stock, which is a common provision in preferred stock.

Prior lien stock is a contract containing an agreement granting a priority of either a rate of dividend or a distribution of asset values, or both, over any other class of stock. This may include a priority over even a class of stock which has been made preferred in comparison with the common stock. The Pere Marquette Railway Company issue of 5 per cent cumulative prior preference stock is an example. This stock is preferred as to assets and dividends over any other stock, thus preceding the cumulative preferred stock in claim. The latter stock, of course, is entitled to assets and dividends ahead of the common stock.

Participating stock is a contract which holds some priority in dividend payment, with the extra right to share in dividends as they are declared upon other classes of stock, especially common stock. The Bon Ami Company common stock A is entitled to a noncumulative \$4.00 per share preference dividend, and shares equally with the B stock in all excess dividends after \$2.50 is paid on the B stock. Extra payments were received in 1929 and 1930.

Classified common stock is a contract that usually grants its owner some preference in dividend but deprives him of the right to vote on most matters. Holders of class A common stock of the Coca-Cola Company are given a preference for dividends only, cumulative at the rate of \$3.00 per share, and possess voting rights only in event of default on two consecutive dividends. Most stocks with variations deprive owners of voting rights, but this is true only when an expressed stipulation withdraws the voting privilege.

Cumulative stock is an agreement wherein the holder is promised that for any year in which a stated dividend is not declared the corporation will thereafter recognize the claim before any distribution from earnings is made to other classes of stock. Such a case is found in the 7 per cent preferred stock of the Curtis Publishing Company, which at the end of 1936 had accumulated divi-

dends of \$7.75 to be paid before any dividends could be paid on the common stock of the company. *Noncumulative stock* is the contract which provides for no obligation to pay dividends unless they are declared each year. These specific terms as to dividends are usually collateral terms of the various classes of stock discussed above.

Transfer of Stock

The corporate stock contract possesses the definite advantage of being freely transferable. On the stock certificate will be found a general assignment form, including a space for the name of the buyer, which may, at the holder's option, be left blank. In this event the instrument is said to have a *blank endorsement*, and the possessor of the certificate may fill in his name. A space for designating the number of shares transferred is provided, for in many cases the number sold may vary from the number as shown by the face of the certificate. A further blank provides for designating a person who shall have the right to sign the transfer record authorizing the certificate for the new owner. It is customary to fill this in with the transfer agent's name. The signatures of the holder and of the witness are the final requirements, and in all cases the signature of the holder must be the same as that on the face of the certificate.

Transfer Agent.—To complete the transfer of the shares after the assignment of the certificate some authorized person must record it on the books of the corporation. Larger concerns employ special transfer agents and registrars to attend to this detail. This frequently becomes a burdensome task, since the sales and transfers may number thousands of shares in a single day. The duly assigned certificate must be forwarded to the transfer agent, who enters the transfer, indicates the certificate number received, and notes the new certificate issued in its place. If only part of the shares are sold, the agent notes the number of the two new certificates which are issued, one to the new holder for the number of shares just transferred, and a second to the old holder for the remaining number of shares that his assignment on the old certificate did not include.

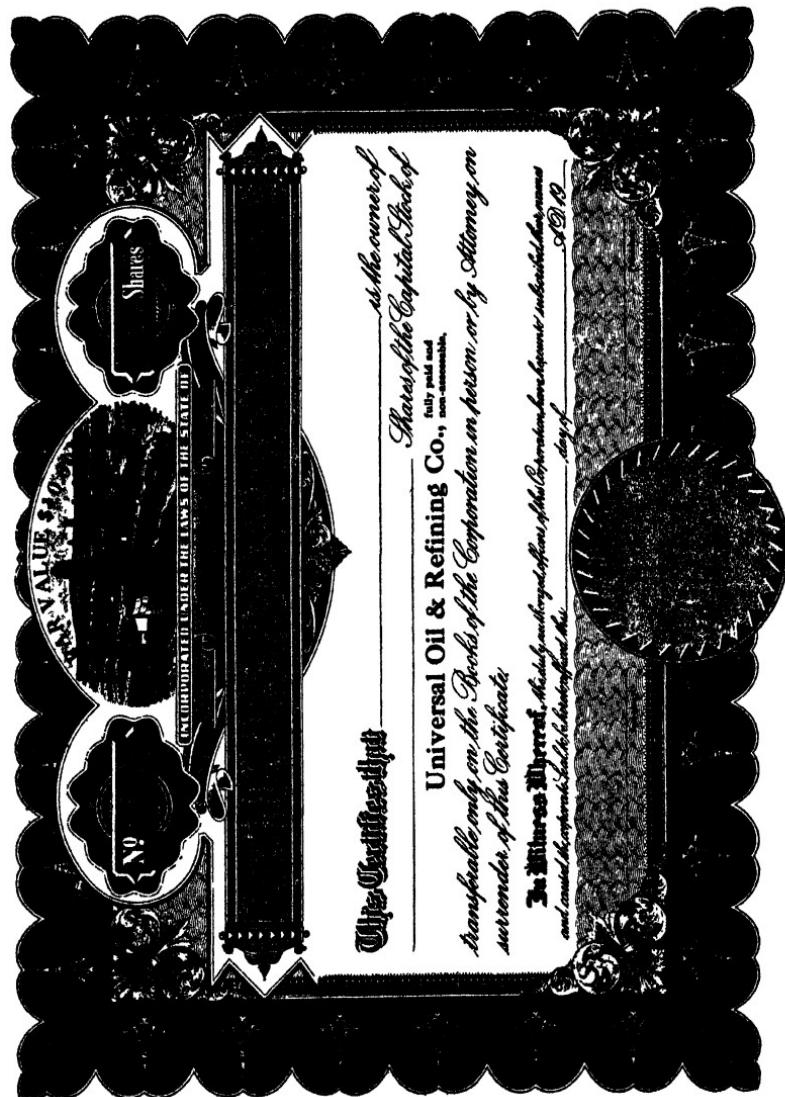


FIG. 8.—Stock certificate.

Registrar for Stock.—After the transfer agent has issued the new certificates properly countersigned they are sent to the registrar, whose task is to enter the change of ownership and to indicate the number of shares held. From this entry the registrar



FIG. 9.—Stock certificate, face and endorsement blank.

prepares the list for dividend payments, including names and addresses. After the entry the registrar endorses the certificate with his signature to validate the transfer and to give assurance that the correct entry has been made upon the corporate records. The registrar is not an employee of the company because it is important that an independent agency check the validity of the certificates in conformity with the charter.

Bonds and Notes

The second general type of security available for raising fixed capital is that of bonds and notes—obligations which, in general, conform to the principles of the common law. These instruments are contracts which impose upon the maker a debt in the form of a promissory note. Though notes are made out with little ceremony, bonds are drawn in legally formal fashion and executed under seal. The holder of a bond or a note is entitled to the repayment of the face sum of the instrument at the definite date named, known as the *maturity date*. The promise usually includes also an agreement to pay a definite rate of interest at specified dates until the maturity date. In case of default of payment, through legal process, the holder may collect both principal and interest out of the earnings or assets of the maker. Holders of bonds and notes must be paid in full from any assets before other contributors, such as stockholders, are paid.

The creation of such a credit instrument entitles the borrower to use the proceeds in any way he chooses until the maturity date unless he is specifically limited by an agreement with the lender. The borrower need not recognize the lender or owner of the bond as having any vote or any right to pass upon the conduct of the business, unless he is guilty of actual fraud. For the duration of a loan, therefore, the lender has no control over the management of his money, even though he may find that it is being unwisely used.

Differences in Secured and Unsecured Debts.—The evidences of indebtedness may be either secured or unsecured. The bonds or notes in themselves are merely unsecured debts, collectible from all the assets, except those pledged to secure other debts. In the event of a pledged asset, that asset must sell for more than the debt it secures before an unsecured creditor may make any claim upon the asset.

The holder of bonds in a secured debt is entitled to collect first from the asset pledged. If the value of the pledged asset is insufficient to discharge the bonds, the bond creditor shares with all other unsecured creditors in the distribution of the general or unpledged assets of the debtor. Security merely gives a creditor



FIG. 10.—Bond form.

the preference to the pledged asset, but the obligation of the debtor to pay from any other asset still remains.

Types of Security.—The type of security granted on a debt may be either (1) personal security or (2) property security. In the former type a pledge is created when a second person, corporation or individual, endorses the debt of another, thereby

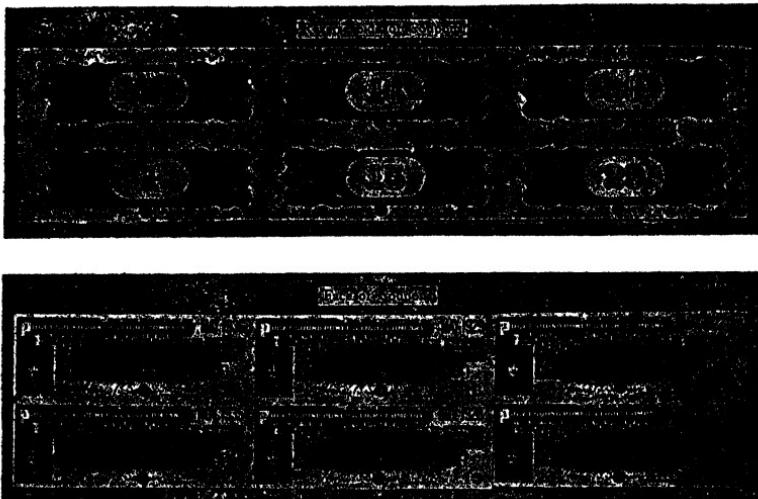


FIG. 11.—Bond coupon, face and reverse.

promising to pay the debt in the event that the original party fails to pay. This is known as a guarantee. Such an instance is found in the Long Island Railroad Company refunding 4's, guaranteed both as to principal and interest by the Pennsylvania Railroad Company. In the latter type of security either personal or real property is given in pledge. A sample of personal property security is the pledge by deposit of stocks or bonds owned by the borrower with the lender or frequently with a disinterested person—a trustee. Such a security is known as a *collateral trust issue*. For example, the Western Union collateral trust 5's are secured by the stocks and bonds of other companies. In some instances the pledge may consist of tangible personal property, such as equipment, railroad cars, or raw materials, in the security form known as a *chattel mortgage*.

Real property security is granted by the making of a mortgage, which entitles the holder to a claim prior to that of any unsecured claimants to whatever property is described in the document. A mortgage is a formal legal instrument. To be effective against anyone other than the parties who make it, the instrument must be recorded in the proper public office of each territory where any of the property named by the mortgage exists. Many of the mortgages of large corporations are voluminous documents and must be forwarded to perhaps ten states and to five or ten offices in each state for their correct recording.

Documents in a Bond Issue.—In preparing for a bond issue the borrower first signs a general loan agreement, generally known as the *indenture*. This agreement is complete and detailed, covering all the respective rights and obligations of both the borrower and the lender. It is made by the borrower in the name of a person, corporate or individual, known as the *trustee*. The trustee is set up as the representative for the bondholders—persons who are as yet unknown. The terms of the indenture are, however, virtually dictated by the banking firm that agrees to underwrite the bonds. Following the requirements of the indenture the bonds themselves are prepared and signed by the corporate officials. The bonds are then certified by the trustee with an endorsement on the face to show that the bond is a genuine one issued by authority of the indenture. This endorsement has nothing whatever to do with the worth of the instrument and creates no liability for the trustee except to see that the bond issuer complies with the stipulations of the indenture. These two documents are all that are necessary in the case of an unsecured bond or note issue.

If the issue is to have mortgage security, the mortgage as a third distinct instrument is created by the borrower, naming the trustee as the party—as representative of all bondholders—with the right to enforce the mortgage. All the terms of this mortgage are set out in the indenture, the mortgage being merely the legal document drawn according to formal legal requirements.

INSTRUMENTS FOR WORKING CAPITAL

A portion of the working capital is derived, of course, from the same sources from which comes most of the fixed capital—the

owner's investment, bonds, and surplus. Management in most cases aims to provide the working capital constantly required by the business from these permanent sources and depends upon the short-term credit sources for the variable funds made necessary by the seasonal and cyclical variations in business volume. A nice adjustment of the sources of the capital to the purposes for which it is intended is therefore a constant problem of financial management.

Informal Instruments

One of the most common means of obtaining working capital is to purchase materials from others on general credit, taking delivery of the goods at once, the seller carrying the obligation to pay as a charge or entry on his books against the buyer. This account creates a general debt contract without any further legal formality. Such credits are ordinarily granted for thirty to ninety days, which amounts to the same thing as the buyer's borrowing at the bank for the same length of time in order to pay for goods. In this case, it is assumed that there is no difference in quotations of cash and credit purchases except for a normal interest charge. Book credit is a very important factor in American business. It is widely used not only in the fields of manufacturing and wholesaling but to a great degree in the retail field. The American manufacturer, middleman, and consumer are extensive users of the charge account.

The Promissory Note

Distinct from the rather formal instruments already discussed in reference to fixed capital are those commonly used in the supplying of working capital to the business. The first instrument of this class is the *commercial* or *promissory note*, which is no more than a promise on the part of the maker to pay a definite sum of money at a given date to bearer or to order or to a named person. It is simple and must remain without conditions or agreements that might in any way change the promise to pay. The note is a general obligation of the maker and enforceable out of all the unpledged assets he possesses. Inspection of Figure 12 reveals the simplicity of the terms.

The promissory note is commonly used alone without pledge or security, though it may be secured by the pledge of personal property. The most usual pledges are made by posting of collateral, or documents of title, that is, warehouse receipts for goods and materials in shipment. Loans on a note to a Minneapolis flour mill are often secured by pledge of warehouse receipts for wheat in storage. The collateral pledges usually consist of stocks and bonds. Time loans to brokers, for example, are usually upon the firm's note and are secured by the stocks and bonds held by the firm.²

10M-2-28-T1

Lincoln, Nebr.,		\$ _____
..... days after date, for value received, I promise to		
PAY TO THE ORDER OF NATIONAL BANK OF COMMERCE LINCOLN, NEBRASKA		
DOLLARS		
with interest at the rate of ten per cent. per annum from maturity until paid. I sign this note intending hereby to charge my separate estate with its payment.		
P. O. _____	_____	_____
NEGOTIABLE AND PAYABLE AT THE NATIONAL BANK OF COMMERCE Lincoln Nebraska		
No. _____	_____	_____
_____ Date _____	_____	_____

FIG. 12.—Promissory note.

The pledge of commodities is the more common because in the natural course of business the great bulk of trade involves goods and materials, either in warehouses or in shipment.

The Draft

A second working capital instrument is the draft, or bill of exchange, which is an order drawn by one person on a second person for the payment of a certain sum of money, at a definite time, to a third person. See Figure 13. The most common use of this class of instrument is in the case of a seller's, perhaps a radio manufacturer in Chicago, drawing a bill against the buyer, a wholesale distributor in Denver, for \$20,000, the purchase price of the goods sold to him. In this case the seller, the radio manufacturer, usually makes the draft payable to himself, then endorses

² Time loans refer to loans with specific dates of maturity, as contrasted with those on demand or on call.

the draft and sells it to his bank in Chicago. Thus the seller is given the use of the purchase price at once. If the draft is a time draft, it requests the party to whom it is addressed to pay within a specified number of days after it is drawn. When the buyer accepts it, the draft having been sold to the bank, the bank is obli-

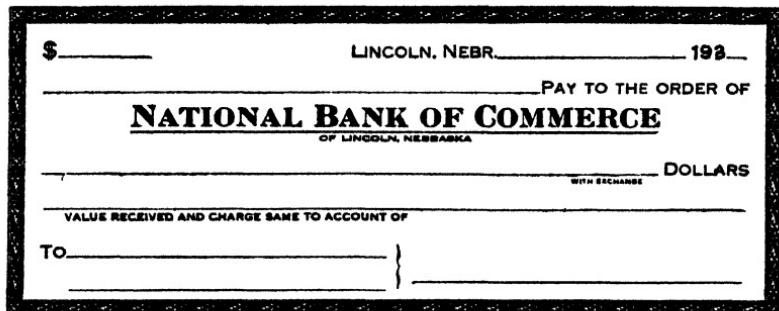


FIG. 13.—Draft.

gated to hold the draft until the due date. The seller receives immediate use of the amount of the draft less discount and the buyer is given use of the goods without immediate payment. This amounts to a loan of working capital to the buyer. Most banks require bills of lading or warehouse receipts—in this case the bill

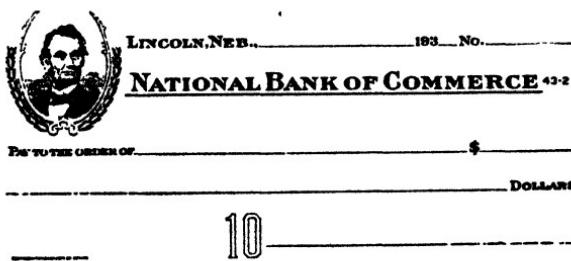


FIG. 14.—Check.

covering the shipment of the radios—to be attached to the drafts so as to have security until arrangements are made with the buyer to pay. The endorsement of the seller, of course, also gives the bank a security, since it constitutes the seller's promise to make restitution if the draft is not collected in full.

The Trade Acceptance

Trade acceptances constitute a third type of working capital instrument, but they are more common in foreign than in domestic trade. The acceptance is no more than a draft from the seller to the buyer, containing on the face of the instrument a statement

TRADE ACCEPTANCE	191	(Name of Bank)	NEBRASKA	(Place of Payment)	(Signature of Acceptor)	D
Date Accepted		No. _____		Lincoln, Nebr., _____ 191		
Payable at		On _____		Pay to the Order of OURSELVES \$ _____ DOLLARS		
With interest at the rate of _____ per cent per annum from _____ until paid. THE OBLIGATION OF THE ACCEPTOR HEREOF ARISES OUT OF THE PURCHASE OF GOODS FROM THE DRAWER.						
To _____ _____ _____ <small>(To be detached and returned)</small>						

We will give you the benefit of our splendid terms of payment—as shown above—if you will sign the above Trade Acceptance and return to us immediately in the enclosed addressed envelope. This Acceptance is an acknowledgment by you in our favor that we have placed in your hands, merchandise as per Invoice and Bill of Lading enclosed, for the payment of which the Acceptance is given. This is the form of payment approved and urged by banks of the Federal Reserve System.

To complete the Acceptance write the date, where payable, and sign your name on the proper lines provided therefor, as printed across the left end of the Acceptance. When due, your Bank will charge your account. This partakes from the open book account method only in giving it a negotiable value.

According to a Federal Bank Governor's opinion, "the signing of an Acceptance increases the financial standing of the giver, because it shows prompt paying methods."

We believe it is only a question of time when TRADE ACCEPTANCES will entirely displace open accounts. We believe all companies should do all they can to reach that end, not only because it will place business on a sounder basis but to make this country commercially stronger for the successful prosecution of this war.

Acme Roll Printing Co., Lincoln, Nebr.

FIG. 15.—Trade acceptance.

that the draft arises out of the purchase of goods by the buyer (or acceptor) from the seller (or drawer). In the shipment of radios to the Denver distributor the manufacturer might forward the bill of lading attached to a trade acceptance to a Denver bank with instructions to have the distributor sign the acceptance before delivering the bill of lading. When the Chicago manufacturer receives the trade acceptance he may either hold it or discount it at the bank. Examine Figure 15 and compare it with the draft in order to fix the contrast in your own mind.

Although the trade acceptance is usually unsecured, it is used because it binds the buyer much more positively to his obligation for the purchase. The banks are willing to take such paper from the seller with his endorsement, whereas the alternative course of entering this sale on the books of the seller as a general account or claim against the buyer is rarely acceptable at the bank. Moreover, the book account fails to contain an expressed statement of obligation by the buyer.

Prejudice in this country stifles the growth of the trade acceptance, though its use has been recommended by bankers and credit men. Apparently the American feels that his word is good, and he is reluctant to admit his obligation definitely in the formal document because he thinks "it just isn't necessary." Observers have repeatedly pointed out that use of the trade acceptance tends toward the restriction of granting credit on a "shoestring" and would substantially reduce the losses from bad debts.

S U M M A R Y

The financial instruments used by business to facilitate the raising of capital and the granting of credit to customers are devices of considerable importance. Essentially these instruments are contracts, and as such they may be made in a great many forms with specific terms drawn to meet the conditions surrounding the particular case. These financial instruments can be classified as to their use for either fixed capital or working capital, but the classification is not a rigid one.

Participation agreements are one type of capital contract. Examples are the stocks of a corporation and partnership agreements. The essence of such contracts is the surrender of capital to the business without creating an obligation on the part of the enterprise to return the investment or to pay annually for the use of it. Provisions which grant special rights to some holders of these participation contracts not given to others in the general group are commonly included because investors can be attracted only by these special rights. Conditions in investment markets constantly change; some contractual privileges are attractive during one period and unattractive in another period. This is illustrated

by the current use of conversion privileges in bond issues which five years ago had no attraction to the buyer.

Debt contracts constitute the second type of agreement for securing and for granting credit. Such agreements require the maker to repay the amount borrowed at a definite date, usually with a payment of interest for the use of the credit. Some form of security is commonly granted in addition to the simple credit contract. All these debt contracts, moreover, are enforceable for both principal sum and interest against the assets of the maker before any liquidating payments can be made to participation contracts.

All financial instruments are contracts. They vary greatly in particular terms, though the general liabilities of each type are uniform. Through such financial instruments the various contributors—participants and creditors—are given claims against a business enterprise, and, in turn, the business gains both its fixed and working capital.

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PROBLEMS

1. Wherein do stocks differ from debt contracts? Relate these differences to considerations of financial policy.
2. Does failure to pay preferred stock dividends have the same effect as failure to pay interest on bonds? Why?
3. How are common stockholders involved in failure to pay preferred stock dividends?
4. Explain the rights a secured bondholder possesses in event of liquidation.
5. Wherein is there a difference between unsecured and secured bonds? Wherein are they alike?
6. Exactly how are drafts used to simplify payments between debtors widely separated?
7. Explain what we mean when we say that the issuance of stock and bonds is a contractual matter.
8. Briefly explain (1) bond coupon, (2) trustee, (3) draft, (4) transfer agent, (5) bond indenture, (6) voting right of stock.
9. What is the purpose of each of the several documents used in creating a bond issue?
10. What class of debt includes notes, drafts, and trade acceptances? Apart from legal rights suggest factors influencing the rating of a concern's financial instruments.

CHAPTER VI

FINANCE INSTITUTIONS: FIXED CAPITAL

The task of conducting the financial operations of a concern is by no means complete when adequate financial statements and proper financial instruments have been made available. In no case can a firm raise money by the simple act of creating financial instruments. Purchasers for the instruments are necessary.

Sale of the securities of a business direct to the public is not often undertaken. This procedure was common, however, in this country until the Civil War because most enterprises were small and the managers found time to approach relatives, friends, or near acquaintances for financial support. In the relatively few instances where large amounts of capital were required, some individual financier who approved the project might provide the capital from his private fortune or banking connections, as was done, for example, by the Vanderbilt and Astor families. The brief boom of direct selling by the firms to their customers and workers during and after the World War was fostered by the scarcity of investment capital and by the desire to establish better public relations for the firms. This procedure, while temporarily effective, was found expensive and inefficient. As normal conditions returned the usual financial intermediaries were again relied upon.

Under modern conditions, since the persons who possess capital for use in business are scattered widely over the country or the community, it is extremely difficult for each business unit to reach them. This difficulty has brought a large group of intermediaries into existence with the special function of making the necessary contacts between buyers and sellers of securities. Due to the fact that the problems involved in the purchase and sale of fixed capital securities differ from those of working capital securities, special intermediary groups have developed for each type of capital. At all times, however, a close relationship exists between both groups.

SOURCES OF CAPITAL

The source of fixed capital is an important matter. This class of capital, it will be recalled, is that which is committed to permanent or long-time assets. There is but one source from which such capital can arise and that is the savings of the community or of other communities. Of all the income produced in a nation, some must remain unconsumed or saved if any is to be turned into permanent assets. In this respect the social group is not different from an individual. It is clear that if a laborer in the factory spends for food and clothing all the wages he receives, there are no savings; there is nothing left for his use beyond the immediate day or two.

The savings of the social group are made in several ways. The first of these ways is that of savings by individuals. Such savings are made in three different forms: (1) savings accounts; (2) placements in property, real or personal (including securities); and (3) premiums on insurance. In the second class of individual savings the way in which the savings are invested is controlled by the individual, but in the first and third classes the savings are surrendered to the savings bank or insurance company, which acts as the investment channel or placement manager for such savings.

The second important source of savings is that of the surplus of business concerns. In the last two decades, this source alone has provided almost half of the demands for business capital.¹ When a business is new a policy of turning the earnings back into the enterprise is usually followed, since it insures a more certain supply of money and is less expensive than selling securities. The prosperous firms have generally found it desirable to use large parts of their earnings to finance their expansion or modernization programs. In concerns like the U. S. Steel Company it has long been the established custom to reserve more than half of the available earnings² of the business for new equipment, and so on, and to pay the stockholders out of the remaining portion.

¹ *Statistical Abstract of the United States*, United States Department of Commerce, 1935, p. 248.

² A. S. Dewing, *Financial Policy of Corporations* (rev. ed., The Ronald Press Company, 1934), p. 618.

PRIMARY INSTITUTIONS

The Investment Bank

The most important intermediary acting to supply fixed capital for business is the investment bank. An investment bank, in the strict use of the term, does not receive deposits out of which it makes loans. The bank acts more as a merchandiser in that it usually purchases the obligations of a business outright and seeks to dispose of them to whomever it may secure as buyers. In some cases, however, the investment bank, like any merchandiser, may agree to sell the securities on behalf of the business concern for a commission to be deducted from the sales price. The investment bank has the same problem of financing its purchases that any retailer might have. Invested capital is the initial source, and the investment house relies upon obtaining a temporary supply, or working capital, from commercial banks whenever securities in large amounts are acquired or purchased outright by the concern.

Function of the Investment Bank.—While the function as a merchandising intermediary is of great importance, the investment bank has other tasks of much deeper significance. This is especially true in those instances where investment banks handle original security issues. Many proposals of raising capital for projects are made in every business day, but many are not financially practicable or socially desirable. Though it is somewhat obscured in the very complexity of modern business, the loss to an individual in the placement of his savings is not a loss to him alone. The loss is that of the whole group or community as well, for in so far as the community has need of more production, a loss of capital which could have contributed added production cannot be afforded. Such a loss of capital makes less production and consumption available to all society. The necessary task of sifting the good proposals from the bad before the capital is invested therefore becomes one of the most significant functions of the investment bank. By long experience, such a bank has acquired extensive knowledge and should be able to judge the merits of proposals.

Purchase of an Issue.—After it has made its first contact with the borrowing firm the investment bank makes but tentative arrangements for financing a projecting, pending a complete examination of the proposal. This examination usually includes reports by engineers, accountants, and lawyers upon the condition of assets, sales, and costs; upon the financial statements; and upon the legal status of the firm and its property. The necessary registration of the issue must be completed with both the State and Federal commissions so far as the issue comes under their regulations. After all these reports are received the investment bank must examine the project from the point of view of general financial policy, and ultimately it must determine the general economic soundness of the concern. If the final result of all these considerations is favorable, the investment bank enters into an agreement with the firm for the purchase or sale of the securities.

The Underwriting Syndicate.—The risk involved in purchasing or selling an issue or several issues of securities is very likely to be too great for one investment bank to assume alone. In this event, the bank which makes the original contact with the business proposes to other desirable investment banks that they join as a group, in a temporary partnership, for the purchase or sale of the securities. This partnership is proposed as a means of dividing the financial risk and gaining the marketing services of a number of banking firms. After sufficient acceptances are received from those concerns invited, the originating bank prepares a contract of temporary partnership for the group. The name *underwriting syndicate* is applied to the group. The term is well chosen, for it implies that a group has assumed or taken over a risk.

It is customary for the originating bank to become the manager of the syndicate. It therefore becomes the duty of this bank to handle all the details, such as advertising for the syndicate, market operations, and the necessary accounting records respecting the disposal of the securities. In addition, the originating house has all the details of the securities to handle. In a secured bond issue, for instance, it must supervise the preparation of the indenture, bonds, and mortgage in complete legal form. The originating house makes a profit for this work by selling the securities to the syndicate members at a price slightly higher than

it paid to the business, and the syndicate agreement allows the originating house a special commission for its work as manager of the group.

At the end of the period agreed upon by the syndicate—usually one to three months—the partnership will be dissolved and the accounts closed. If the sale of the securities was successful, there are profits to distribute to the syndicate members. Otherwise there may be losses which the members must assume.

Distribution of Securities.—The syndicate members are, of course, banks similar to the originating house and have a wide range of contacts among other firms, large and small, constituting their own special clientele. When the bank has become a member of such a syndicate it turns to this clientele in an effort to sell the securities. The syndicate members do not, for the most part, sell direct to the general public but turn to other investment banks in other communities and to small retail investment firms which in turn are in contact with the general public. The syndicate may sell directly to a large investor, such as an insurance company, but this is not the chief channel through which the sales are made. The investment bank must protect the retailer and may not take over directly all the most profitable customers. A prospectus of any recent corporate issue contains information about the underwriters. Such facts may be found on page 22 of the prospectus of the Bethlehem Steel Corporation, 3 3/4% issue of 1966, or on page 21 of the prospectus of the American Telephone and Telegraph Company, 3 1/4% debentures.

The retail outlets for these securities in the local community are generally in the retail department of local investment banks, among the investment dealers, and in the investment department of the trust companies. Thus through this constantly widening fan of contacts, running from the syndicate to the many local agencies in most communities of the country, those persons or firms with capital saved (for investment) are reached. Should purchasers of the securities not be found, then the dealers, and in many instances the syndicate members, have to hold the securities among their assets.

This description has centered on syndicate operations in reference to large corporate issues. A similar procedure is followed

by the local investment banks of many cities, differing only as to the amount involved. Two, three, or four banks in the smaller cities may, for example, take an issue of \$200,000 from a local or neighboring business concern. This is really a syndicate. These investment banks sell the local concern's issue to the small dealers and banks of their territory. Thus the procedure of a large corporate issue is duplicated in a small way for this concern's security issue. This may even be said of the farmer's \$10,000 mortgage issue which is underwritten by a local mortgage bank and resold to individuals or to small-town dealers. Through the operations of all these units as parts of the investment banking system the fixed capital requirements reach the various enterprises.

SECONDARY INSTITUTIONS

While the chief channel for distributing securities is through the investment banks, there remain other important assisting channels or intermediaries. These secondary channels operate to fulfill this function of making permanent capital available in a manner less direct than the investment banks.

Once the original issue is distributed, demands of the purchasers to liquidate or realize upon their securities may arise. The decision to resell may be dictated, among other things, by a desire to lessen risk, to obtain higher rates of return, or to convert permanent investments into working capital. The resale of the securities is the chief function of brokers and the stock and bond exchange.

The constant and open market which these intermediaries help to create gives such stability to securities that they are readily accepted as collateral at the banks and are highly regarded as permanent investments. These channels are used also for disposal of the "undigested" securities—the unsold portion of a security issue—remaining with original syndicate members. Through the secondary channels these undigested securities are gradually sold to purchasers at competitive prices. An important phase of the work of these channels is their effect on the distribution of capital to various kinds of industries. Since the prices set in these markets represent estimates of risk and profit in the various fields of business, these prices help to determine at what interest rates

and in what amounts capital will flow to particular industries in competition with those of all other fields.

Brokers

The first of the assisting intermediaries is the broker, or agent. His task is to act as a representative for others, either buyers or sellers, in the attempt to find a seller of or a buyer for the security in question. Brokerage firms, as a matter of their strict functioning, do not purchase an item until it has been ordered by a buyer. Then the broker acts on the account and risk of that particular buyer, assuming no obligation or risk himself. For the service rendered, he is paid a commission. When acting for a buyer the broker may find a seller of the security ordered either directly or through the offerings of still another broker. The work of the brokers is not primarily a part of the original disposition of securities. The broker's transaction is a later sale by one investor to another. Most of this buying and selling, therefore, is in the nature of shifting ownership of the security, with no change in the actual amount of capital being made available to business. Brokers frequently trade on their own account and become important factors in the market by reason of their trading in the speculative markets.

Stock and Bond Exchange

A second intermediary institution assisting in the placement or replacement of capital investments is the stock and bond exchange. This is a private organization of a group of brokers found in the larger cities as Boston, New York, and Chicago. The organization maintains a place of business, which operates under rules made by the members. The members meet regularly at the exchange offices in order to arrange the purchases and sales that may have been ordered by other persons. Not all brokers have access directly to the exchange; those who are not members must ask a member of the exchange to act for them. Likewise, individuals who desire to buy and sell securities listed on the exchange must make their contracts through a member broker.

Listing on the Exchange.—Each exchange maintains what is known as a "list" and brokers execute orders on the exchange

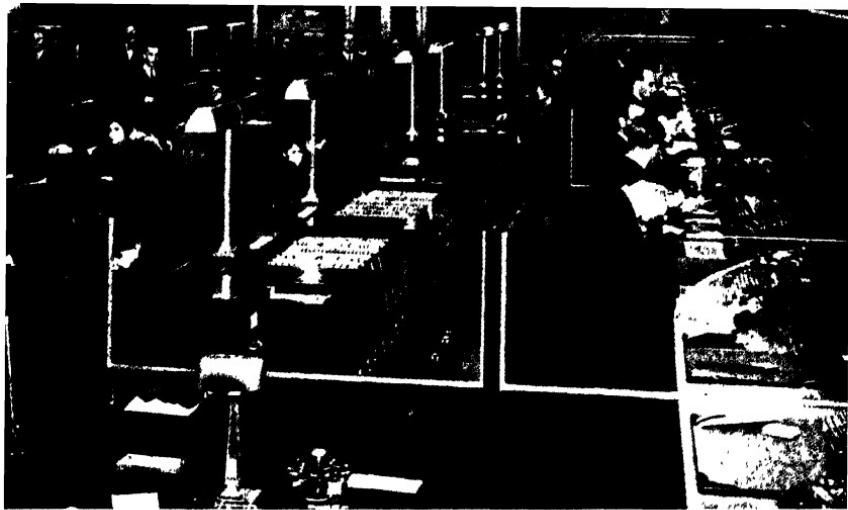
only in those securities which have been listed. This list is determined by the exchange itself from applications made to it by firms which desire to list securities for trading. If an application is accepted, the firm pays a commission to the exchange for the privilege of listing. The large business firm seeks to list its securities because the facilities of the exchange greatly increase the marketability of its securities. Listed securities are usually more attractive to investors than unlisted ones, and the fact that the securities are listed on the exchange is a selling advantage.

Unlike the investment bank, the exchange does no trading on its own account. The function of the exchange is to render facilitating services to the buyers and sellers of securities.

Since a security cannot be listed unless it is accepted by the exchange, the latter is in a position to exert great power and to influence the general financial conduct of firms. Originally, the exchange accepted only those securities for which there was a market demand. Inclusion in the list was a question of whether there was sufficient buying and selling to make it worth while for the exchange to handle the security. Gradually the exchanges, particularly the New York Stock and Bond Exchange, began to lay down requirements for annual financial statements. Special reports were frequently required of the firm whose security was listed. This was done because it was deemed unwise for the exchange to function in the interest of unsound enterprises.

More recently the exchange has begun to recognize that the extensive public dealings in securities necessitate regular and accurate information. As a result, all firms are required to report their financial status to the exchange at definite times each year, and these reports are then released to the public by the exchange. Other confidential reports may also be required. The action is especially commendable in view of the fact that some concerns refuse to release information to the public. Much information, however, is still withheld from the investor and steps should be taken by the exchange to see that the firms give additional information to the public.

In past years, the exchange has been severely criticized for the speculative activity which has been conducted through its facilities. In its broad functioning there is little complaint to make, but many practices have been established which, when



(Courtesy Remington-Kand, Inc.)

The working side of the commercial bank.

The lobby of a commercial bank.

(Courtesy *The Merchandise Mart*)





(Courtesy Newsphotos.)

Brokers sorting their trading orders.

Upon receipt of an order to buy, the broker goes to the post where the particular stock is traded in. At Post 6, shown here, General Electric, American Can, and many others, are bought and sold.

(Courtesy Newsphotos.)





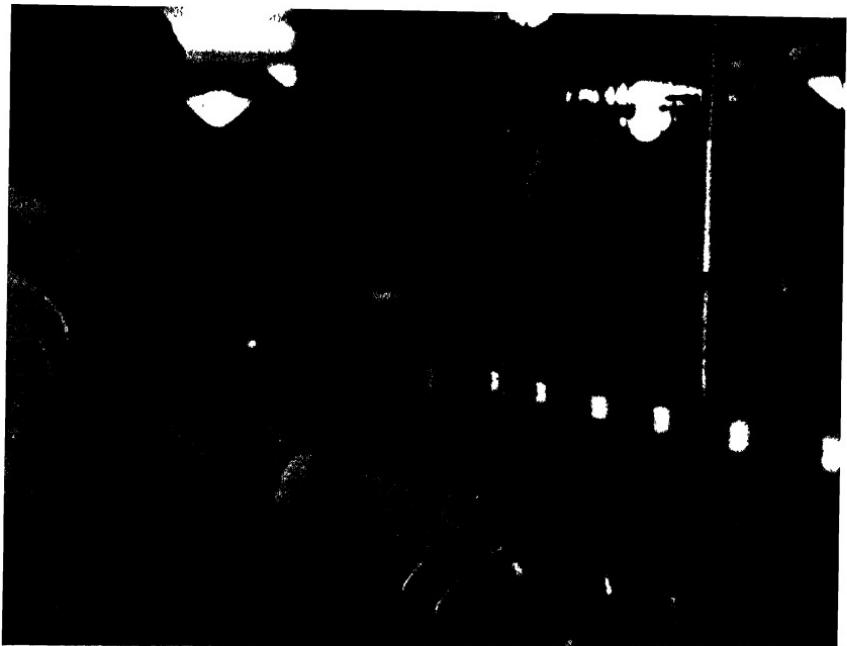
(Courtesy Newsphot

Clerk telephoning bid and asked quotations from stock exchange to offices of member brokers.

All trades are recorded on brokers' notebooks.

(Courtesy Newsphot



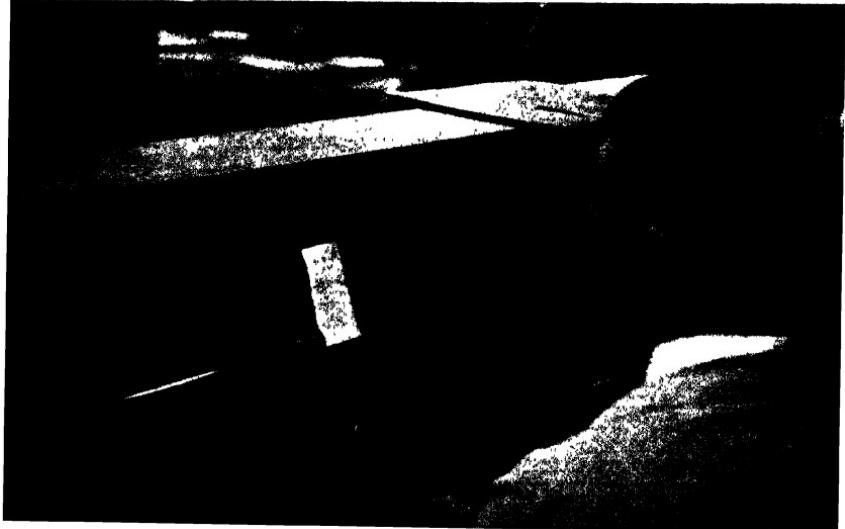


(Courtesy Newsphotos.)

Some brokers receive their buying and selling orders from their offices through pneumatic tubes.

Minute-to-minute ticker tape reports come into brokers' offices all over the country from this teletype machine.

(Courtesy Newsphotos.)



abused, lead to serious public and social consequences. The exchanges in the future will continue to offer their essential service as intermediaries but broader regulations, both private and governmental, will need to be observed.

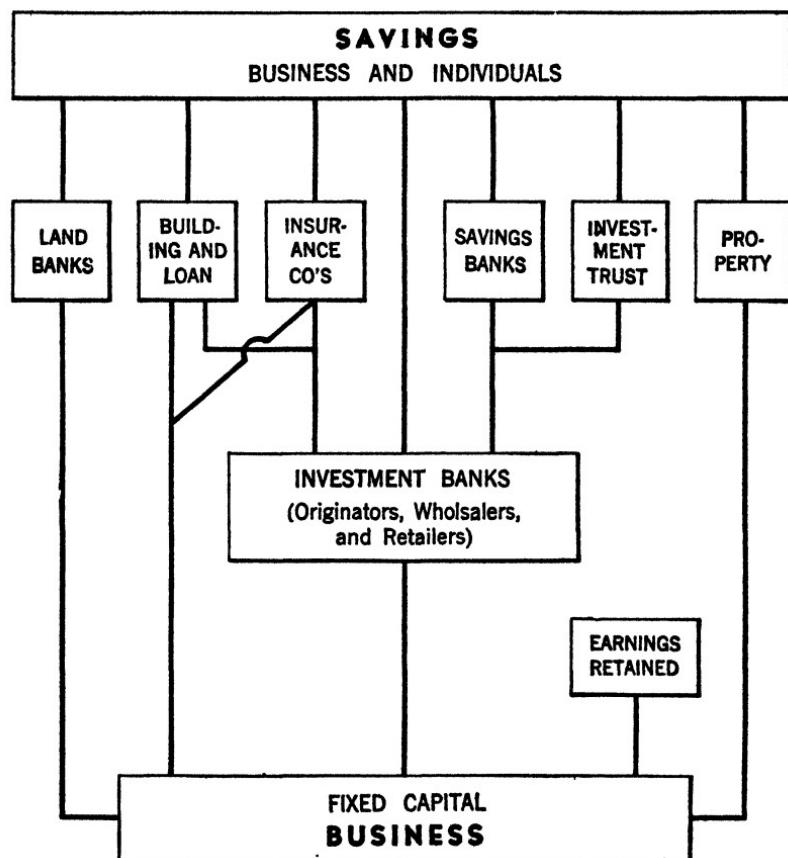


FIG. 16.—Fixed capital channels.

Security Exchange Commission.—The regulation of security exchanges and their practices is now under the supervision of a special Federal commission. All exchanges, brokers, and dealers must be licensed under the provisions of the law and are required to conform to the regulations for trading adopted by the commission. Violation of these requirements may lead to suspension or

fines for either exchanges or individuals. Important steps as to margin requirements, short-selling practices and reports, listing requirements, and as to separation of dealer and broker functions have already been taken by this public commission.

Investment Institutions

A distinct group of financial enterprises has been developed to serve individual investors and especially persons who are saving money and do not care to invest it themselves. These institutions, however, do not include in their work the promotion of security issues for business concerns.

Savings Banks.—The oldest of these enterprises is the *savings bank*,³ a concern that seeks the deposits of the individual. The savings bank⁴ usually promises an interest return to the depositor if he leaves the deposit at least six months. In turn, the bank invests the greater portion of the combined deposits in real-estate mortgages and in securities of both local and national firms, from which it receives a higher interest income than is paid the depositor. The depositor does not receive a specific security for his deposit but only an agreement on the part of the bank to repay his money. The investments are made in the name of the bank and the bank bears a liability to discharge all its deposits out of such investments and the invested capital of its owners. The aggregate sums so placed in the savings banks of the country have ranged from twenty-three to twenty-eight billion dollars over the past ten years and represent a very substantial source of the fixed capital of American business.⁵ These institutions have one of the finest records in the financial field, showing a repayment of 99.9 per cent of all deposits.

Insurance Companies.—Second only to the savings banks, the most prominent institutions in the investment channels are the *insurance companies*. Whether dealing in life or property insurance, they seek to collect in their premium charges sufficient capital

³ This term is used to include savings deposits of commercial banks, trust companies, and the postal savings system.

⁴ Technically, mutual savings banks pay dividends and not interest, though a small interest rate is sometimes promised.

⁵ *Statistical Abstract of the United States, 1935*, p. 248.

to enable them to pay all losses to the insured. Whenever there is no unusual series of disasters, the losses in these fields are usually met out of current income. The premiums, which flow consistently into the companies year after year, must be invested, and can be placed for the most part in permanent investments. The investments by life and property insurance companies had grown to over twenty billion dollars in 1932, or at the average rate in the past decade of about six hundred millions each year.⁶ Through this channel, therefore, the savings of the nation flow into the fixed capital of many enterprises.

Commercial Banks.—In their effort to diversify their loans and to create secondary reserves of marketable securities commercial banks invest large amounts in the fixed capital securities and mortgages of concerns. Relatively near-term maturities are usually favored. Since 1934 these investments have become a large portion of invested assets, since commercial loans have run at a low volume. Banks which are members of the Federal Reserve System showed in June, 1937, 19 billion dollars of investments out of 33 billion dollars invested assets. These investments are mainly in government securities, which class totals 12.6 billion dollars, while other marketable securities total 6.1 billion dollars. In addition the banks have 2.4 billion dollars of real-estate loans.⁷ When the demand for commercial loans rises a great number of these securities will be sold.

Investment Trusts.—Another form of investment enterprise is that of the *investment trust*, a legal association which enters into an agreement with its clients to pool the savings of the members and invest them in securities. The management of an investment trust is vested in a small executive body, the trustees, who, for the most part, are free from all control by the members, being subject only to the restrictions set up in the original agreement. The members receive shares or beneficiary certificates which entitle them to proportionate claims upon the investments of the trust made up in "units." These units contain a definite part of

⁶ *Ibid.*, pp. 275, 277; Association of Life Insurance Presidents, *Proceedings of Thirtieth Annual Convention*, 1936, p. 103, shows this amount to be more than twenty-three billion dollars.

⁷ *Federal Reserve Bulletin*, Federal Reserve Board, June, 1937, pp. 587-588.

each separate investment made by the trust. The investments owned by these associations may be either fixed, that is, unchangeable, or managed, that is, changed by the trustees.

This type of investment channel has been used for a long time in England, but it is comparatively new in the United States, where it was introduced after the World War and had its greatest vogue from 1925 to 1929 while the country was experiencing the upward surge of the financial markets.

Personal Trusts.—A fifth investment institution is that of *personal trusts*, resulting from legal arrangements whereby a person commits the control of part or all of his property to be permanently handled by a trustee for the benefit of another. The trustee in such cases is commonly the trust company, or the trust department of a commercial bank, though individuals often serve as trustees. The property left in charge of the trustee, along with any undisbursed earnings which may accrue, must be invested. Thus a large part of the capital of the business world may come through the trustee's choice of the securities that various concerns seek to sell.

Land Banks.—The *land bank*, Federal or joint-stock, is another institution through which saved funds flow into business. These banks lend to farm owners upon mortgages that become the security for bonds issued by the banks to the individual saver. A small equity investment is supplied by the capital stock issued by the banks. The agricultural demands for capital are now supplied chiefly through these channels, but there are likewise the individually operated mortgage companies. Both of these institutions lend funds to farmers for the purpose of buying and developing farm lands.

Building and Loan Companies.—Still another institution open to the saver is the *building and loan association*. In substance these institutions are co-operative groups composed of persons who borrow for the purpose of buying homes or other urban property, and who make regular deposits thereafter for the discharge of the loan and payment of interest thereon. Some savers, who do not wish funds for purchasing property, simply buy shares of these associations outright for their income alone.

Social Importance.—Through these several investment channels and intermediaries of the investment field the savings of the individual person and concern are made available, in a general mingling with the savings of others, to a particular business. In the end, of course, the whole series of transactions amounts to a country-wide movement of savings out of national income. These savings thus serve to increase the total national production as they flow into the permanent assets of all business enterprises. The task is a vital one because it involves the financial well-being not only of the many individual savers, but also of the national group. The very complexity of the economic structure and the extensive use of capital by single concerns makes the task still greater. The responsibility which rests upon the shoulders of investment banks and intermediaries is especially great. An ill-considered movement on their part might cause the whole carefully built structure to crack in a supreme test.

REGULATION OF INSTITUTIONS

General Regulations

Since such vast sums of money are handled by these investment institutions for thousands of individual investors, it is interesting and important to raise the question as to how these investments are regulated. In the case of the savings banks the States not only specify general fields of investments and the specific tests for securities in which the funds of the banks may be invested, but also require that the books be examined annually by the officials of the State. In some States, the regulations also include the examination of individual security issues to see whether they comply with general standards set up by law for the investments of the bank. These same rules commonly apply to the trust accounts handled by trust companies, and to the assets of building and loan associations. State governments require insurance companies to submit their books for examination, and frequently prescribe the general fields of their investments, together with the specific tests which a particular security must meet.

It should be clear that such regulations give no assurance that the general choice and division of the investments will be

made wisely. Associations of the kind under discussion may violate fundamental principles of investment while still following the general regulations. For example, too large an investment in any one security in comparison with all investments may bring difficulties for the enterprise. The state is not in a position to control these errors of management through regulation.

Blue-Sky Laws

In many States there are regulations known as "blue-sky" laws. These laws are devised to prevent the sale of fraudulent securities. Exemptions are made for government securities, for almost all established business firms, and for those fields of business already under some regulations, such as the public utilities and the railroads. Securities that have any apparent soundness are accepted by the commissions, but even if they are refused in a particular State, sales made through the use of the telephone and telegraph cannot be prevented. While the laws have had a beneficial effect, they do not give adequate protection. Many securities escape examination altogether and others are exempt. Approval by the examination board, in any case, is not to be interpreted as a certification of the worth but only as an evidence that the securities are offered in good faith.

Federal Security Act and Securities Exchange Act

The United States government has passed a law covering securities issued whenever sold in interstate commerce, as well as the operations of security exchanges dealing in such commerce.⁸ The Securities Act was passed in the 1933 special session of Congress under the Roosevelt Administration. This regulatory measure is far more extensive and comprehensive in its requirements than any previously devised by the individual States. The principal provisions of the law are as follows : the Securities Commission is empowered to approve a registered security issue before public sale; detailed factual statements must be made about the business ; a prospectus must be issued to the purchaser ; and, penalties may be imposed for violation of the law. For the accuracy of statements made in the registration of securities issued this legis-

⁸ Securities Act of 1933 (U. S. Statutes, Title 15, Chap. 2A); Securities Exchange Act of 1934 (U. S. Statutes, Title 15, Chap. 2B).

lation places personal responsibility upon all who represent the company under examination. Such a practice has been followed in England and has been accepted there by businessmen without much question and with apparently little risk to themselves.⁹

The general powers and relation of the Security Exchange Commission created under the Security Exchange Act in reference to the stock exchanges have already been mentioned.

S U M M A R Y

Most business firms find it inadvisable to place their securities in the hands of investors directly, but rely instead upon the intermediaries which constitute the investment banking system. The *investment bank* has assumed the important function of tapping the many sources of capital and making the funds available to particular business concerns. The task is difficult because the sources of capital in the United States are widely scattered throughout the country in the form of savings account balances, insurance company reserves, and savings of individuals. In other words, the investment institutions, such as the investment trusts, insurance companies, and savings banks, function in the system as facilitating concerns for the centralization of capital which has been saved by countless individuals and concerns.

A secondary system within the larger investment banking structure is made up of the *brokerage concerns* and the *stock and bond exchanges*. These institutions do not directly dispose of securities; rather they serve as a central market for the resale of outstanding securities. This central market is important in that it gives these securities liquidity, establishes their value as collateral, and furnishes current indexes of judgment for those that are listed in the market. These institutions are valuable factors in the financial mechanism, too, for they help to make securities more acceptable as investments and subject business firms to examination as profitable economic units deserving of the investor's capital.

Prior to the Federal acts of 1933 and 1934 this field was not

⁹ Companies Act Amendment Act, Aug. 3, 1928; see H. R. Seager and C. A. Gulick, Jr., *Trust and Corporation Problems* (Harper & Brothers, 1929), p. 598.

effectively regulated either as to the institutions themselves or as to the securities they sold, even though some restrictions had been created both by the States and by the exchanges. The Securities Act and the Securities Exchange Act of the Federal government are both important regulation measures now operating in this field of investment banking and securities issuance, and the regulations by both State and Federal governments are now more comprehensive than previously.

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P R O B L E M S

1. In what ways may savers invest their funds? To what use will the institutions put such savings?
2. Explain how the facilitating institutions in the investment bank system operate.
3. Why are reinvested earnings so commonly made the source of capital?
4. Explain how insurance companies serve as a source of supply for funds needed for fixed capital purposes by industrial concerns.
5. What is meant by referring to the banker as a responsible agent in the guidance of economic activity? As an agent in the apportionment of our productive resources among the various enterprises of the community?
6. What position does the stock exchange occupy in the financial structure? What does "listing" on the exchange mean?
7. The bond house functions as an agency to obtain capital for new enterprises and for old. Just how does it obtain this capital?
8. Persons contribute to the capital of corporations of which they have never heard. How can this be true? Can you see any reason why such a practice should be objectionable?
9. Explain briefly the functions of the investment banking system; indicate some of the institutions which serve in this system.
10. Describe an underwriting syndicate. How does it function to reduce risk?

CHAPTER VII

FINANCE INSTITUTIONS: WORKING CAPITAL

The sources of working capital for a business are in considerable part distinct from those which we have just examined for fixed capital. In investigating the sources of such capital we must keep in mind the nature of the working capital. Although it is not committed to fixed assets, part of the working capital is virtually permanent to the business, since any operating concern needs a minimum quantity of working capital in current operations. On the other hand, much of the working capital is temporary because fluctuations of business volume and price levels produce varying demands for the capital above the absolute minimum to conduct the operations. As was suggested in the discussion of promotion, the permanent working capital can well be supplied through the permanent financial structure. For an established firm, the surplus becomes a valuable and consistent source of working capital.

Temporary working capital is raised by the issuance of short-time credit contracts. The chief sources of such loans to a business are from the sale of its commercial notes and drafts, and from credit accounts granted the business by other firms.

P R I M A R Y I N S T I T U T I O N S

Commercial Bank

As in the field of fixed capital, intermediary institutions have developed for the purpose of making working capital readily available for temporary use to those concerns that need it. The chief institution serving in this capacity is the commercial bank. The primary function of this class of bank is the gathering of deposits, which it agrees to repay to the depositor on demand or to others in favor of whom the depositor has drawn a check against the bank.

Most of these deposits do not represent savings, but are instead the current income of the depositor, out of which he pays his bills. It is for this reason that the bank agrees to repay the deposit on demand and that it refuses to pay interest on the deposit. Likewise, this temporary nature of the deposit indicates that the bank must be careful to make its loan for only temporary use by a business. To do otherwise would be to invest the deposits in a way that would prevent a quick liquidation of them in case of demand, which is certain to come, though probably not from all depositors at once.

A considerable part of the total bank deposits, however, represents time deposits or savings of the depositor who wants easy access to his funds together with an arrangement whereby he earns interest. The bank may lend the time deposits to local concerns or individuals on their promissory notes and mortgages maturing within one to five years. In this case the commercial bank functions as a savings bank.

As the major part of these demand deposits may technically be withdrawn at any moment, one may possibly conclude that they give the bank little chance to lend money. It has been found, however, that in the course of these many deposits and withdrawals there is a relative stability in the total deposits; that the deposits of a day about cancel the checks drawn on the bank. The bank needs, therefore, to be prepared to pay out in cash at any one time only a very small portion of its total deposits. This sum which the bank must be prepared to pay in cash is known as the *reserve*. It varies in amount, depending upon particular conditions, but normally a reserve of 20 per cent is considered adequate. When the reserve is above 20 per cent the excess reserves can be employed by the bank to make loans, and this the bank usually seeks to do.¹

Pyramiding of Credit.—The loans made by the commercial bank on the basis of these deposits that represent current income

¹ Federal reserve member banks are classified as central reserve, reserve, and others; reserve requirements in each are 13, 10, and 7 per cent respectively for demand deposits, and 3 per cent on time deposits. All reserves for this requirement must be kept with the reserve bank. Other reserves may be kept as the bank may determine.

of the many depositors, create an interesting situation. Most borrowing customers leave the proceeds of a loan on deposit with the bank, and in many cases are required to maintain their deposit above a certain amount. When the borrower pays his creditor the banks regain the deposit from the creditor which permits

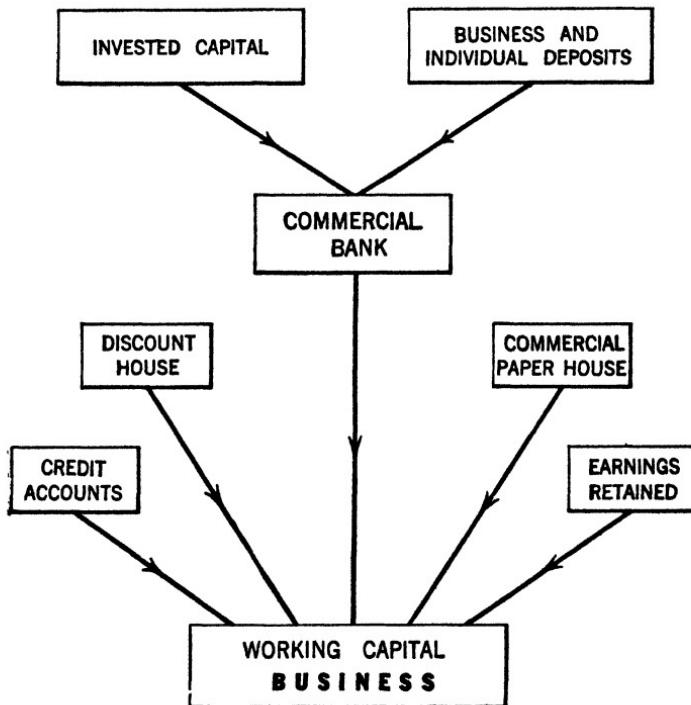


FIG. 17.—Working capital channels.

more credit expansion in the banking system. Thus the balance which the borrower has maintained with the bank, plus the amount which the bank system recovers through a redeposit, gives the bank system a basis for lending to still another customer. Thus for the whole bank system *loans make deposits* and *deposits assist in the making of loans*. This process, which is the chief function of the commercial bank in the modern business structure, may be rightfully called the *magic of credit*.²

² See Fig. 17.

Extent of Use.—Because of this commercial bank credit it can be said that credit is a far greater part of the medium of exchange than money (commodity and representative money). Money in this situation becomes largely a means of settling balances, as they vary from day to day, and between one bank and another. Business in the United States is usually conducted on about an 80 per cent credit basis and a 20 per cent cash basis.⁸

Policies.—The results of cash payments by a bank when there is an excess of withdrawals over deposits are seldom serious, but they may frequently go beyond the usual limits. The bank is therefore under the necessity of making its loans for short periods of time only and for purposes out of which it is believed income will arise to discharge the loans within the periods stipulated. Only by such a loan policy will the bank be ready at all times to collect on loans and thereby to increase the quantity of its cash. This increase is obtained by the bank's refusal to make new loans and by the collection of all loans as promptly as they mature from day to day.

Importance.—Because of its power to create credit and because credit is the basis of most of the country's current transactions, the commercial banking system becomes the very center of the financial structure. As a consequence, wise or unwise handling of this power of credit creation becomes a matter of great concern to the whole business structure. Overexpansion of credit may easily bring a collapse of the pyramid, while undue restriction of credit decreases the volume of business. It should be made clear, however, that the bank or the banking system does not exercise complete control over these situations. Much of the credit overexpansion preceding 1929 was made possible by private lenders, despite the efforts of the banks to restrict credit expansion. Failure to obtain expansion of bank credit in 1931 and 1932 resulted from the fact that borrowers would not seek loans—a condition which the banking system could not remedy.

Most commercial banks do not lend regularly to those outside the immediate community. The ordinary loan is usually made on a single note which the bank expects to retain in its note case;

⁸ W. C. Mitchell, *Business Cycles* (National Bureau of Economic Research, Inc., 1927), p. 150.

that is, the object in making the loan is not to resell the note or parts of it to others who have capital, as is the case with the investment bank. The bank receives its income from the interest or discount paid by the borrower on the note given to the bank. Out of this income the bank pays for all the necessary equipment and clerical work incident to keeping books for the many accounts that constantly vary in amounts as checks are paid and deposits are made.

Federal Reserve System

Both the magnitude of bank credit and the necessity of unifying the operations of the individual banks in the United States in view of the vital part they play in the whole credit structure brought the present Federal Reserve System into existence. This system is composed of a group of twelve district Federal reserve banks, each governed by a local board of directors, but all responsible to a general board—the Board of Governors of the Federal Reserve System—appointed by the President of the United States and confirmed by the Senate.

Each district bank is owned by the member banks of the district. The reserve bank usually deals in all its banking functions with member banks, not with individuals or business firms. In 1934 the banks were empowered to make direct industrial loans if these loans were otherwise unobtainable.⁴ These reserve banks attempt to provide member banks with a national clearance and collection system, loan privileges by purchase of the notes of member banks, a national discount market, and a flexible amount of currency.

For the whole nation the Federal Reserve System seeks to control credit through a large group of powers. Some of these powers are exercised through determination of the kind of commercial bank loans upon which member banks may borrow, setting of the interest rate at which loans to member banks will be made (the rediscount rate), buying and selling commercial paper and government securities in the open market, and the setting of the reserves required of member banks.

Space here does not permit a more complete discussion of

⁴ In April, 1937, total advances under this heading were but twenty-two million dollars. *Federal Reserve Bulletin*, June, 1937, p. 579.

how the Federal Reserve System functions and with what success it has met in its operation. Suffice it to say that because of the need for central banking control of our modern complex and diversified credit relations, this institution is maintained.

SECONDARY INSTITUTIONS

Commercial Paper

Some business concerns may need to borrow in excess of an amount which can be supplied by a local bank. The size of the loans may be too great,⁶ or so many loans may have been made to other borrowers that the bank cannot advance further credit. In this situation, or perhaps previous to any application to the commercial bank, the borrowing business may issue its notes for a commercial paper loan. Commercial paper is a series of promissory notes aggregating the amount required by the business and prepared in amounts of \$1,000, \$2,500, and \$5,000. Since firms wishing to sell commercial paper are subject to a searching analysis, only those of good credit standing can do so successfully.

Commercial Paper Agencies

A commercial paper issue is offered by the business to commercial paper agencies which act as intermediaries by taking the paper from the borrower and seeking to find purchasers for the individual notes. The commercial paper is usually sold to banks in other communities having surplus funds, and to other business concerns that have a temporary excess in working capital funds which they seek to keep placed in order to produce some earnings. By this distribution capital is utilized and made available over a much broader territory and in much larger sums than individual banks can well afford to lend. The time on these notes is usually longer than for an ordinary bank loan, being from six to twelve months. The meat-packing industry is one, for example, which makes an extensive use of the commercial-paper method of borrowing. Because of conditions already discussed and because the animals are purchased in large numbers at times of the year when

⁶ All banks are limited in any one loan to a percentage figure—usually 10 per cent—of the capital, surplus, and undivided profits.

consumption is not great, large sums of money are tied up in the inventory until finished products can be sold.

Many firms use the commercial paper loan for working capital whenever possible without resorting to the commercial bank. This is done because the time period is usually longer, the loan is larger, and the interest rates are usually lower on the better class of loans than must be charged by the commercial bank. Moreover, some firms prefer to arrange for bank credit and then use the other avenues for partial requirements, thus leaving their remaining bank credit to be used as an emergency measure.

Commercial Paper House.—The commercial paper may be distributed through a commercial paper house, which purchases such issues outright on its own account from the borrowing concern. The house then resells the notes in small denominations to various business concerns and persons desiring short-time placement of their funds. A profit is made by the paper house by buying the commercial paper for less than it asks of the ultimate purchasers, usually a discount of $\frac{1}{4}$ to 1 per cent of the note. Since it does not receive deposits but acts solely as a merchandiser of the loan paper, the commercial paper firm is to be distinguished from the commercial bank.⁸

Note Brokers.—Frequently a firm may offer its paper to the purchasers through brokers or agents, or it may be forced to do so when no commercial paper house will purchase the issue. These brokers seek to find purchasers for the paper and receive a commission for the sales that they make. They serve also during the life of the various commercial paper issues as valuable intermediaries by which the paper may be shifted by the original buyer who needs to liquidate his investment to another concern having a temporary surplus of funds.

Use of Commercial Paper by Banks

Commercial banks have always valued the opportunity to purchase commercial paper. Investment in this paper offers a method of lessening risk by making a part of the total loans in diversified territories and businesses. The commercial paper likewise

⁸ See Fig. 17.

serves the banks as an emergency reserve. Since the commercial paper agencies make the issues easily resold, a bank can sell its holdings of commercial paper within a few days if the necessity for meeting extraordinary cash demands arises. This liquidation could not be so quickly effected if it were done entirely at the expense of local loans. In that case, moreover, it probably would only magnify the bank's difficulty by retarding business transactions within the community. Inactive business means fewer deposits and greater difficulty in getting the loans reduced. Thus it is important for banks to cultivate the emergency reserves that commercial paper holdings and short-term government bonds may offer.

Discount Companies

Since great amounts of credit are granted through the medium of open accounts or book credit by manufacturers, wholesalers, and retailers, it is natural that agencies should be developed to handle such credit. Normally, this type of credit remains as part of the assets of the firm until the account is collected. Many firms do not regularly sell the accounts or borrow upon them as they do with the drafts and notes of their customers. For situations that require some disposal of the accounts, however, finance or discount concerns have been developed that either lend on or purchase notes secured by assignment of book accounts. In the case of automobile concerns, frequent use is made of discount companies. Instead of using a book account, the automobile purchaser gives his note secured by mortgage on the car. The chief automobile concerns have set up their own discount companies for this business.⁷ The General Motors Acceptance Corporation reached a peak in 1929 with more than 1,100 million dollars in notes receivable purchased, and in 1936 they purchased more than 800 million dollars.

The discount houses are increasing in importance because many of the larger ones have aggressively sold their services to business concerns selling both heavy goods, such as machinery and power equipment, and consumption goods, such as furniture. These houses offer exclusive contracts to business concerns to take

⁷ See Fig. 17.

all the conditional or installment-sale contracts which the business concerns accept from their customers. This policy of the discount houses has extended their service and has increased the ease with which the funds are made available to business. The 1936 report of the Commercial Credit Company, an important firm in the field, shows a total purchase of receivables of more than 789 million dollars for that year.

Factors

The textile and export fields make use of another important intermediary for a considerable part of the temporary funds necessary to facilitate their sales. This intermediary is called a *factor*. It is common in the textile industry for a mill to have a contract under which the factor agrees to discount all customers' bills or to advance a substantial portion of all invoices for goods sold by the mill and to guarantee the accounts to the mill. The factor does not engage in any of the sales work, leaving that to the mill and its agents, but he either lays down stringent credit rules or administers the credit extensions through his own credit force for the sales made by the mill. It is a common practice also for the mill invoices to include the factor's name, with instructions for payment of the bill direct to the factor. This institution is highly specialized in credit operations and gives the mill a much greater percentage of the invoiced values than could be obtained at the commercial bank. The factor also finances transactions for the manufacturer. When goods are shipped to a finisher, the factor agrees to lend the mill a portion of the value of all raw materials billed for finishing, to pay the finisher, and to hold the goods for the mill's account. This commodity credit firm—the factor—thus proves to be an important financial resource at several stages of the textile industry. The factor has the advantage of offering a flexible service, an efficient credit staff well acquainted with the trade, and credit extensions on a much smaller margin than is usual.

REGULATION OF INSTITUTIONS

The State regulations of the various institutions engaged in making working capital available may now be examined and compared with those regulations in the investment or fixed capital

field. The existing regulation, divided between the State and Federal authorities depending on which has granted the banking charter, centers upon the commercial bank. Apart from the commercial banks, other channels for securing working capital are little regulated.

Examiners, either State or Federal, are employed by the government to examine the books and records of each commercial bank, chartered or private, one or more times within each year. These examiners make recommendations on the nature of the loans in the bank, and the banking department at its discretion may require the bank to remove any loan from the files. The bank complies by charging the loan against accumulated earnings called *surplus*, or by requiring the stockholders to pay in an assessment.⁸ The general fields within which loans may be made, together with limitations on the size of any one loan, are also prescribed by the regulatory laws.

Published statements are required of all commercial banks, but they are inadequate as a means by which the public may judge the bank, because the public does not understand the statements, and because they are so abbreviated and lacking in essential information that even an accountant can tell little of the actual financial condition. All other information regarding the bank is withheld from the public by the government, on the supposition that if a bad situation became known a panic might ensue.

S U M M A R Y

Working capital is made available to business through a variety of institutions. The direct extensions of book credit by one business firm to another involve no immediate use of the credit institutions, but it is likely in most instances that the firm granting the book credit obtains the credit in part through the facilities of one or more of the financial institutions.

The center of the working capital structure is the *commercial bank*. The commercial bank has an unusual credit-making power in its ability to create bank credit. This is done by making loans in the form of bank deposits. These credit deposits, checked only

⁸ After July, 1937, national banks have no further double liability feature (Banking Act, 1933).

by the cash reserve requirement, actually increase the capacity to make more loans. Thus the commercial banking resources of the country create the largest part of all working capital extension.

The *commercial paper agencies*, the *discount houses*, and the *factors* contribute secondarily to the supply of business working capital. Though these institutions possess some contributed capital, they themselves rely frequently upon the commercial banks for funds which they in turn lend to business firms.

A financial structure therefore exists within which all these institutions are connected in all directions, like strings in a net. Within that net each part can be mutually helpful or harmful in weakening or strengthening the whole structure.

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P R O B L E M S

1. Explain fully wherein the functions of the commercial and the investment banks differ.
2. Compare the commercial and investment banking systems as to: (a) sources of credit supply; (b) time element of credit extended; (c) legal relations with the customer; (d) relation to stock and bond exchange.
3. When a merchant can borrow from banks at 6 per cent interest, and he has a bill discountable 3%—10 days, net 30 days, will it pay to borrow to pay the bill? What interest could he afford to pay?
4. What is the distinction between a savings bank and a commercial bank?
5. How may it be said that a commercial bank creates credit money?
6. How does the commercial paper house assist business concerns in securing working capital? Explain the mode of operation of a commercial paper house.
7. Explain why commercial banks should not normally serve as sources of supply of funds for fixed capital purposes by industrial concerns.

8. Would you say that the State should supervise commercial banks more strictly than it supervises savings banks? Explain the reasons for your answer.
9. If the suggestion to prohibit banks from creating credit were adopted, what effects would follow?
10. What relationship exists between the investment and commercial banking systems? What dangers exist therein?

CHAPTER VIII

FINANCIAL POLICIES: PLANNING FOR FUTURE PERIODS

Waste in a business is found not alone in the physical handling of goods, but also in management's lack of preparation for making and selling goods in a well-controlled manner. By planning for the future, the managers can avoid much waste. Until very recently, business has followed the shortsighted policy of adjusting financial matters as they arise, making little effort to anticipate coming needs. This attitude is based for the most part on the assumption that sales and other conditions could not be predicted as much as twelve months in advance. Without the great volume of information that accounting and statistics have made available during their rapid development of the past twenty years, this assumption would have a strong factual basis. Any firm with a good accounting system has some very positive facts about the present period which can serve as guideposts in future periods. The data gathered by statisticians regarding special fields of business and business as a whole give indisputable evidence of the effects of certain conditions, and afford managers a safe criterion for planning. Business management has available, therefore, two well-grounded procedures to assist it in planning for the future periods in the form of (1) budgeting and (2) business forecasting.

BUDGETING

One of the devices most useful to a business in planning for future periods is the budget. A budget is a schedule of the expected operations. It is used as a goal and a guide in actually handling problems as they arise from day to day. Budgets play an important part in determining financial policies as well as other policies of the business. They are used in order that full control may be maintained; in order that co-ordination of the departments may reach a high degree; in order to create a basis for pricing

future deliveries; and in order to prepare adequately for raising capital (usually working capital) at the proper time, without waste or delay.¹

In attempting to maintain control, the manager realizes that a consistent measure of the progress toward the goal set should be available, and he is able to gauge the progress of his business by comparing the actual results with the expected results set up in the budget. At the same time, by the use of these comparisons, he can place responsibility upon that department of the business and the personnel in charge for not keeping up with the plans laid out in the budget. These comparisons direct the manager's attention to those matters in current production that need closer supervision and enable him to rectify any errors that may keep the business from accomplishing expected results.

It should be clearly recognized that in the course of the period for which a budget is drawn conditions beyond prediction may intervene to thwart its application. This likelihood, however, does not call for discarding the budget but only for a revision which any manager should always expect to make if the budget is to be efficiently utilized.

The making or revision of a budget is an opportunity for a complete exchange of views from all parts or departments of a business. Once the views are worked into a budget there should be more unity of operation among the departments, since the whole plan is clear and the individual task of each department is detailed. Since the end is known and defined this practice has an advantage over any hit-and-miss procedure.

Kinds of Budgets

Budgets may be created on either a financial or a unit-of-product basis. In the latter case there is a planned schedule for making and selling various products and for the course of operations in the production and selling departments as a whole. Discussion of the details of budgets other than financial will be left to later chapters on production and selling. The financial budget is constructed on the basis of the income and expenditure expected

¹ See F. F. Burtchett, *Corporation Finance* (Harper & Brothers, 1934) Chap. XXVII.

within the coming period. To supplement the general financial budget a cash-payments-and-receipts budget is often made to provide working capital. The difference between the cash and income budgets rests in the fact that income includes the returns from

BUDGET Capital Company, Inc.										
Cash Budget										
	July					August				
	Pre- vious Year	Esti- mate This Year	Actual	Per Cent Variation		Pre- vious Year	Esti- mate This Year	Actual	Per Cent Variation	
				Year	Esti. .				Year	Estl.
Receipts										
Cash sales	2,200	2,600	2,500	+13.	-3.8	2,000	2,400			
Collections	2,000	2,100	2,200	+10.	+4.7	2,400	2,200			
Other income	100	75	75	-25.	0.	125	100			
Total	4,300	4,775	4,775	+11.	0.	4,525	4,700			
Disbursements										
Payroll	1,000	1,200	1,250	+25.	+4.1	1,000	1,200			
Salaries	500	500	525	0.	+5.	500	500			
Bonus	500	600	575	+20.	-4.5	450	550			
Purchases	2,000	2,100	2,200	+5.	+4.8	1,750	1,900			
Taxes	100	125	135	+25.	+8.5	***	***			
Insurance	***	***	***			***	***			
Rent	***	***	***			***	***			
Loans	1,000	1,000	1,000	+100.	0.	***	***			
Interest	100	50	50	-50.	0.	***	***			
Dividends	***	***	***			300	300			
Total	4,200	5,575	5,735	+36.	+2.9	4,000	4,400			
Balance	100	800	960							
Deficit										
Capital additions										

FIG. 18.—Cash budget form.

both credit and cash sales. The income budget, moreover, is designed to plan operations to show a profit, which result, of course, is not dependent upon cash alone.

Make-up of a Budget

The general or plant financial budget is usually in a summary form containing very little detail. It shows the principal sources

of income and kinds of expenditure, and the amounts expected at various dates within the whole period. The plant budget is supplemented by departmental budgets that detail the expected showings in more complete form, probably on a weekly basis. The two major parts of the plant budget are the sales schedule and the production schedule, the former representing the chief source of income and the latter the principal costs to be incurred.

The sales schedule is constructed after a careful market survey under the current conditions and after a comparison with past achievements of the concern under similar or other circumstances. General business conditions, as well as the firm's particular market area, have to be studied. Upon the information gained, an estimate is made of the volume that appears to be justifiably expected for the coming period. A schedule is made up of production volume and costs to match this estimate of sales. Often in this connection the budget is divided into parts that first show what may be classified as *assured volume*, with the proper cost distribution to correspond. This is possible in most businesses because the firm has many customers that are fairly constant, or it may have long-time contracts outstanding upon which orders are to be received. This classification in the budget may be followed by a section showing the probable volume that seems reasonable to expect because of some additional sales expense or because general conditions show a tendency toward better buying. This sales probability is matched by a different cost distribution as the result of the addition of *probable volume* to the *assured volume*. A third part containing *possible volume* may be added if any reasonable cause for its need appears.

On the basis, therefore, of these plans and the degree to which they are accomplished from week to week, or month to month, preparations in all departments of the business are made. In this way a close control can be kept over all financial elements of sales and production, and preparation can be made for meeting either a sudden rush or a sudden falling off of business.

B U S I N E S S F O R E C A S T I N G

The second procedure assisting in planning for future periods is that of business forecasting. This procedure can easily be made

a very important adjunct to budgeting though it is not absolutely necessary for an operations budget. It becomes almost a necessity in the preparation of any capital budget where considerations beyond the immediate business season or year must be accounted for and where the factors rest on long-run economic trends.

Business forecasting is an attempt by a process of comparison and economic reasoning on the basis of existing facts, expressed statistically or in business annals, to predict the future course of business. If new situations intervene, such forecasts must be modified. These predictions may be made respecting (1) general business or (2) a particular field of business, and they depend upon the questions that the management has undertaken to study. In most cases the two phases are closely interwoven and each needs consideration.

The development of the data and the interpretative procedure has taken place extensively in the universities, but individual business enterprises have been set up in the past thirty years to supply these services to the business world, presenting their findings and predictions to subscribers to the company's service.

Business Services

There are numerous statistical organizations which sell their services to business enterprises. These concerns usually publish not only a weekly bulletin on general business but from time to time make studies of particular fields. Their service includes general investment recommendations, advice to particular trades on the purchase of commodities, and special studies of individual problems for extra fees.

One of the business barometers which may be briefly examined for illustration is constructed as a chart. The base line is divided into years and across the face of the chart from left to right is drawn a heavy black line known as the *normal trend line*. The position of this latter line represents the assumed growth of business volume in the light of population and productivity changes. This line, therefore, indicates where business volume should be in any year or part of it, without regard for seasonal variations. Across the face of the chart from left to right and weaving up and down across this *normal line* moves a line show-

ing the actual volume of business being transacted. The conclusion is consequently drawn that, depending upon where the actual volume line may be at the moment, the course of its movement in the immediate future can be foretold and the general variation over a lengthy period predicted. This prediction is made on the theory that since there is always a principle of action and

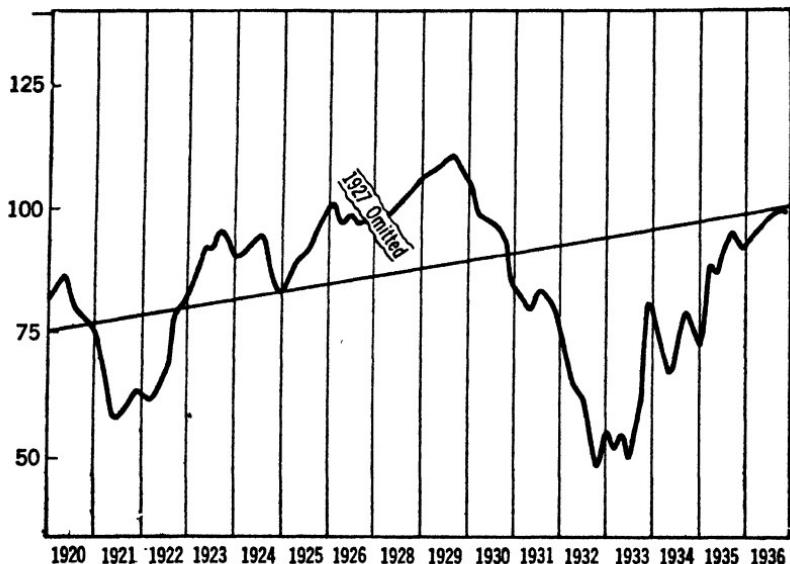


FIG. 19.—Business forecasting chart.

reaction at work, excesses above the *normal line* will run a course until they cause a break, so to speak, which will send the actual course of business in the opposite direction. Thus, over a lengthy period of time, there will be a volume of reaction to offset the original action.

This particular system has been subjected to considerable criticism by economists as being artificial and as constantly shifting its base, the *normal trend line*.

A second service offered for similar purposes as a general business guide bases its predictions upon the theory that there is a clear relation between the factors of money rates, speculation, and general business volume in the form of a time sequence. Thus, a general movement in one of the factors, according to the theory,

forecasts a succeeding movement of the next factor in the sequence.

The second service shown in chart form has three lines moving across a chart from left to right, with the seasonal variations omitted, one line representing money rates and activity, a second, speculation, and a third, general business volume. According to this service the sequence of these factors is, first, a movement in money rates and credit activity, followed in order by speculative and general business changes.

By reference to the chart showing the present positions of these three factors, and with knowledge of the relations of sequence, one may predict about how soon and in what volume a movement will take place in the other factors with reference to one of them.

A third well-established service is founded on the sequence theory of banking, speculation, and business, and has adopted the basic theory of commodity prices in relation to general business. Thus a rise of prices should carry the business to a rise, while a fall of the prices predicts a lowering of business volume. This service measures the chief factors in price movements and makes its predictions accordingly.

The chief factors relied upon by the service are the level of living compared to volume of production, ratio of imports to exports, ratio of purchasing power to standard of living, and ratio of commercial paper rates to volume. Excess in the ratios is taken to indicate activity above normal. Within zones of 10 per cent deviation from the normal ratios no prediction is undertaken, but beyond such deviation a prediction can be made as to future movements, the exact degree of which will be indicated in the amount of the deviation and the unanimity with which all the ratios move in the same direction.

Each of these three forecasting services makes use of much the same statistical material. The difference in them lies in the emphasis given the various elements in the whole picture. The first service emphasizes business volume in movements of upswings and downswings as offsets to one another, while the second service uses the movement of money rates as its key. The third service emphasizes price movements as the determining factor in its predictions of general business trends.

In using any of these services one must judge its value to the particular business. The finest type of business forecasting service admits of no certain prediction of what may be safely done, since economic and social factors are too unstable to be reduced to formulas. These services, however, are useful in assisting the manager to reduce the risks arising from economic changes of which he might otherwise be unaware.²

S U M M A R Y

Planning for future periods of a business is one of the duties of the business executive if risk is to be intelligently understood and controlled. The executive finds both *budgeting* and *business forecasting* valuable aids in making future plans.

Budgeting gives a co-ordinated plan to a business. It may be used as a goal, as a test of accomplishment, and as a test of efficiency. Budgets may be prepared on the basis of units of product or upon the basis of money values. In a business of considerable size both forms of the budget are frequently used, both being divided into departmental units. Budgets must be given a flexibility that will permit them to conform to changed conditions if those who rely upon them are to consider them just and satisfactory tests.

The analysis of current economic and financial data in view of known economic principles is the function of business forecasting. The work of forecasting is done by a number of private firms which sell their services to managers of all types of institutions. These forecasting services usually give weekly summaries of principal data together with an interpretation of the material. Special services dealing with particular businesses or individual cases are available. The businessman must always use his own judgment as to how far he shall apply the findings given him by the business forecasting service. The risk has not been eliminated, but the facts surrounding the risk have been more accurately gauged by the use of forecasting services.

² For examples, see the services of Moody's Investors' Service, Poor's Service, Fitch's Service, United Business Service, Babson Statistical Organization, Brookmire, and Standard Statistics.

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P R O B L E M S

1. Indicate the relation of budgeting to the raising of capital, the pricing of goods, and the administration of the business.
2. Why should budgets be remade at times? Does this not destroy the purpose of a budget?
3. How are the uses of budgets and of forecasting services related?
4. What difficulties can you see in the efforts to create business forecasts?
5. Explain how there can be need for more than one kind of budget. Would they be related?
6. Why do not all forecasting services agree in their conclusions?

CHAPTER IX

FINANCIAL POLICIES: CREDIT, DEBT, AND RISKS

MANAGEMENT OF CREDIT

Because such a great volume of business in the United States is done through the credit medium, estimated to be 80 per cent or more of all trade transactions, the management of credit is of paramount importance in the financial and economic structure. Close attention must be given to the credit phase of a business because it represents a large use of the capital of the business. The balance sheet of Armour and Company, October 31, 1936, shows the outstanding mercantile accounts to be \$35,131,241.75, or approximately 23 per cent of the current assets, and that of R. H. Macy & Co., February 1, 1936, shows outstanding mercantile accounts amounting to \$5,319,445.80, or nearly 20 per cent of the current assets of the firm.

The management, therefore, must carefully supervise the granting of credit to prevent too great an extension in the aggregate or in individual cases. Excessive costs in the grant of the credit privilege and in the collection of the account, likewise, are to be avoided. Credit may, of course, be extended in many forms, such as bank loans, sale of customers' drafts, and mercantile credit or book accounts. The following discussion centers upon mercantile credit represented by that granted by the retail store and manufacturer, but it illustrates the policies apparent in all credit operations.

Granting Credit

The first matter to be handled in the determination of credit policy is the procedure and the requirements to be met in the granting of credit. This work is normally divided into (1) opening new accounts and (2) passing upon the quantity of credit to be permitted in old or established accounts.

In allowing new accounts to be opened, the firm usually ex-

pects the customer to apply for credit, giving in the application the general information that the firm needs in order to investigate the request. This application covers the identity of the customer, nature of business or employment, extent to which credit is now used and where. A manufacturer or wholesaler may require references, particularly banking references. Normally these references are investigated to ascertain the reliability of the customer as shown in other credit relations and his general financial standing. As further proof of the financial standing of business concerns, financial statements for the last two years are submitted either directly by the customer or indirectly through a credit bureau. Depending upon the conclusion of this investigation, the application is granted with a limit prescribed as to the extent to which credit can be regularly granted.

Credit Analysis

The credit risk involves the primary factors of the character of the debtor, the capacity of the debtor for management, the capital of the debtor, and the general economic conditions affecting the debtor's income. Credit is granted or withheld, depending upon the facts presented by each individual applicant.

The character of the debtor is judged by his reputation, his record for honesty, and his promptness in paying his accounts. His capacity for financial management and the amount of his capital are evident in his financial statements. The economic conditions surrounding the debtor as well as the creditor may be determined by reference to the trade journals and to the forecasting and economic advisory services.

Analysis of the financial statements of mercantile debtors is a most important phase in the formation of the credit policy and in the determination of the volume of credit to be extended. In the case of credit granted to individuals for consumption purchases this examination of statements is usually less frequent than in the case of credit granted to a business concern.

Analysis of Financial Statements.—When the financial statements are examined as an act preliminary to the granting of credit, a great deal of reliance is placed on the use of financial ratios. The profit-and-loss statement discussed in Chapter IV includes

the computation of a few of these ratios. In addition to the comparison of the present to previous ratios of the firm, it is helpful to make a comparison to those ratios generally found in the field of business in which the debtor is engaged.

Of the ratios which are commonly used for analysis of financial statements the *current ratio* is the one by which the volume of the current assets is compared with the volume of the current liabilities. In the statement for Armour and Company shown on page 66, the current assets, approximately \$153,000,000, divided by the current liabilities, approximately \$41,000,000, gives a result of 3.7 times the amount of the current liabilities. This is understood by the credit analyst to be in line with current business ratios and indicates that the firm has a strong capacity to meet current debts.

The *quick ratio* is also commonly used as a measure of the ability to meet current debts without taking into account any of the inventory values. In this ratio the total of the cash and accounts receivable is compared to the total of current liabilities. The figures shown by the statement of Armour and Company indicate the total of quick assets as \$49,000,000, the division of which by the current liabilities of \$41,000,000 results in the figure 1.2. The ratio tells the analyst, therefore, that the quick assets amount to 1.2 times the current liabilities, and that the current debts could be paid without further sales.

The *turnover* of the *accounts receivable* is determined by dividing the total credit sales by the average accounts receivable. The *turnover* of *inventory* in which the total sales figure is divided by the average inventory is likewise a commonly used ratio. The *rate of earnings* to the capital employed and to the net worth is also frequently used.

All these ratios and many others are regularly used by the credit analyst as important tools in his work of granting credit. Though the exact process of analysis and the many other measures of financial results cannot be discussed more thoroughly here, this brief survey of the procedures should make clear to all students of business the importance of a further study of accounting and financial management.¹

¹ See A. Wall, *How to Evaluate Financial Statements* (Harper & Brothers, 1936); *op. cit.*, Burtchett, pp. 523-572.

Supervision

After an account has been opened supervision over the amount of credit in use at any one time must be continually maintained. Often the customer requests an especially large allowance of credit or of time within which to pay, and such a request should be granted only when there is current knowledge of the exact amount of credit involved. The credit manager must be supplied, therefore, with cumulative credit sales reports immediately after each sale. During the entire existence of a credit account it must be closely scrutinized for any failure to meet the usual terms. Such a failure requires attention at once if collection difficulties or possible loss of the debt is to be prevented. The failure should also be made a matter of record for future reference in connection with continuing the account or restricting its use.

Terms of Credit

One of the principal matters of credit policy is the term for which credit is granted. Credit terms concern the length of time for payment, discounts, if any, for prepayment, and the form in which the account is carried—whether as a note or as an open account. The general practice is to carry credit extensions in open account form, though in some fields the use of notes is more common. The note offers, as was mentioned earlier, a better document for collateral for loans at the commercial bank, and has a good psychological effect on the customer toward prompt payment. Although the note system cannot be satisfactorily used in the general merchandise store, it is successful in a manufacturing business turning out such heavy goods as, for example, electrical equipment.

In general, whatever the form, it is advantageous to the business to restrict the time on the credit granted as much as possible because the credit represents the loan of capital by a business to the customer. In some fields a long-term credit is necessary and the margin should cover the cost. Long credit periods lower the general speed of turnover in the working capital and usually result, therefore, in lowered profits. Discounts for cash prepayment of accounts are used as an incentive to early payment. Through

them is recovered at an earlier date the capital involved in the account, and thus the turnover of working capital is quickened.

The question of permitting installment sales contracts is also a very important one to a credit manager. These contracts require a very extensive collection system, and a large sum of working capital. The decisive factor in this case is the sales volume that is produced by the use of the installment feature. If the sales volume is increased sufficiently to offset the costs incurred for the extra risks and expenses the management may properly adopt the contract as a regular phase of its credit policy.

Credit Information

Gathering of accurate and up-to-date information is, of course, the heart of good credit management. The facilities set up within each business for handling and compiling credit information must be determined. A business customarily relies on the co-operative or private credit bureaus for the information given by other creditors and on direct correspondence with the credit applicant and his references.

Credit Information Agencies.—The efficient control of credit accounts requires a large amount of accurate information upon which judgment for the credit extensions can be based. Most firms either maintain a credit department or have someone working at this credit task, but the chief sources of information are the mercantile credit agencies or bureaus. These agencies may be privately operated concerns or co-operative exchanges conducted by the local business firms. Such organizations seek to gather information about the financial standing and character of all who ask for credit as well as the credit history of those to whom credit has been granted. Co-operative bureaus are organized into a national organization to facilitate the exchange of information between communities. Such a private agency as Dun and Bradstreet is likewise organized on a national scale and offers a wider variety of services. The financial information of the larger concerns includes the latest balance sheet and income statement if they can be obtained. The information so gathered by the agencies is disclosed only to members or to those concerns that purchase the service.

Collections

Collections and effective collection policies are the final test of good credit management. Credit accounts are useful in building up sales volume and customer convenience only if the debts are promptly paid with little expense incurred in collection. It is necessary, therefore, for credit managers to discover as promptly as possible all accounts overdue. Second notices may clear up the delinquency, but in any event the customer should be notified. Failure to get a response necessitates following up the customer to discover reasons for nonpayment. If the customer has not paid because he has been dissatisfied with the service, the cause of the dissatisfaction should be removed before pressure for payment is applied. On the other hand, the economic circumstances of the customer may have changed, a situation which he is naturally reluctant to admit. In this case the firm may be able to assist the customer by a rearrangement of the credit terms, thereby assuring continued collection. If all follow-ups fail, it is a question whether the services of a collection agency should be sought or whether legal action should be taken. In many instances either procedure may be more expensive than it is worth. It might, moreover, be injurious to the firm to have the matter publicized. These questions are decided in view of the special facts in each case, and final action is taken in accordance with the best judgment of the management.

R E T I R E M E N T O F D E B T

General Policies

The retirement of long-time debts of a concern is a question of policy to be decided by the owners or the board of directors. This problem is a very important one among all the financial policies. It is not necessarily the best policy to retire all debt even if such action is possible. The advantage in using the credit of the business and in creating long-time debts rests in the difference between the interest rates paid and the rate of return received on the borrowed capital employed in the business. Thus, if the rate of return substantially exceeds the interest rates and if the risk of maintaining the debt is not too great, the creation of long-time debt is a source of profit. This source of profit may be used to

increase a company's surplus or to increase the profits paid to its stockholders, or owners.

The wisdom of creating long-time debts is dependent upon the stability of the debtor's income. Because the interest charge is fixed it should be kept at an amount lower than the income of the debtor in the low-earning periods. To insure that the fixed interest charge will create no financial difficulties in a period of lowered earnings good policy demands a plan of regular debt reduction. The necessity for decreasing the debt of a company may not actually arise, but it is better to prepare for it throughout the lifetime of the debt than during the last few months of its duration.

Methods of Retirement

In the event that a concern adopts a policy of retiring its long-time debt, in whole or in part, several methods are available. Bonds may include provisions for redemption by the business, for conversion by the security holder, for payments of parts of the debt in serial or annual maturities, or for payments into sinking funds to be used to discharge the debt.

Redemption.—The redemption provision, which is part of the security contract, enables a concern at its option to call upon the debt holder to surrender the instrument to the business in return for payment of the face sum. An extra payment by the company is often provided for as a premium to the holder for the loss of interest and the inconvenience of seeking a new investment. The periods in which the option may be exercised and the method for calling certain instruments out of the whole group are prescribed in the agreement granting this right to the concern.

Inspection of the redemption clause in the issue of the National Dairy Products Corporation 3½ per cent debentures of 1951 shows the following statement in the bonds: "Redeemable in whole or in part at any time upon at least 30 days' notice, . . . 105 per cent prior to May 1, 1941, with successive reductions in the redemption price of ½ of 1 per cent on May 1, 1941, and on each May 1 thereafter prior to maturity." The 1928 bond redemption plan of the U. S. Steel Company, which provided for retirement partly out of cash and partly out of sale of stock, illustrates how the firm used this privilege. Exercised at that time it placed

the company in an excellent position to face the years of depression which followed.

Conversion.—A contractual stipulation known as a conversion clause is frequently included in debt and stock obligations, entitling the security holder at his option to exchange the instrument for another security of the concern. The issue of the Union Oil Company 4's of 1947 contains the following conversion clause: "The convertible debentures are convertible on or before May 1, 1937, or if called for previous redemption, on or before the date fixed for redemption, into shares of the capital stock of the company of the par value of \$25 per share, at a rate fixed, with respect to the principal amount thereof, according to the following schedule: If any convertible debentures shall be deposited for conversion on or before May 1, 1939, at the rate of one share of such stock for each \$25 principal amount of such convertible debenture; if so deposited after May 1, 1939, and on or before May 1, 1943, at the rate of one share of such stock for each \$27.50 principal amount of such convertible debenture; if so deposited after May 1, 1943, and on or before May 1, 1937, at the rate of one share of such stock for each \$30 principal amount of such convertible debenture." In so far as the holder of the debt exercises the conversion privilege it enables the concern to reduce its debt by replacing it with one of its stock contracts. The extent to which these provisions are exercised is, however, very uncertain. It is dependent upon dividend prospects and is not a particularly satisfactory method of debt retirement where the established policy calls for actual reduction of the debt.

Serial Payments.—Debt issues that require the concern to make regular payments on the debt in each year or half year may be created. These arrangements are known as *serial maturity obligations*. The Chesapeake and Ohio Railway Company 4½ per cent equipment notes created in 1930 and due in 1945 provide that the company "shall be obligated to pay the sum of \$1,320,000 on May 1 of each year, beginning on May 1, 1931, up to and including May 1, 1945." These payments over the fifteen-year period of the loan will discharge the entire sum of \$19,800,000. The provisions give convenient spreading of maturities and are often desired by the investor. The regularity of retirement also tends to

enhance the value of the debt by reason of the reduction in it, and creates another selling advantage. This slow but consistent reduction of the debt is advantageous to the debtor because the burden of debt retirement is spread over many years. This required payment may become burdensome, however, if great fluctuations in business volume are encountered. In this case the absolute requirement might well result in severe reduction of working capital or in an unwarranted default.

Sinking Funds.—Provisions may be made in a loan contract requiring a concern each period to put a fractional part of the debt into an account or a fund to be used to retire the obligation in part or as a whole. In the Armour and Company (Del.) 4's of 1955 are found sinking fund provisions as follows: "Annually, on June 20 in each year, commencing in 1936, there will be payable into the sinking fund either in cash or at the option of the company in Series B bonds at the sinking fund redemption price thereof . . . , an amount equal to (i) the sinking fund redemption price obtaining on the next succeeding Aug. 1 of an amount of Series B bonds amounting to 1 per cent of the aggregate principal amount of Series B bonds issued prior to such June 20. . . ."

Even without this contractual requirement many firms set up sinking funds and maintain them as a method of preparing for payment of their debt. These sinking funds may be used for the immediate repurchase in the market, or by redemption of a certain amount of the debt. This procedure has the advantage of obtaining an immediate reduction of the debt. The fund, in an alternate plan, may be invested in other obligations and held by the firm until the maturity of its own debt. Under this circumstance the concern expects to liquidate the other obligations in order to pay its own maturing debt. There is a disadvantage in this practice in that the investment of the fund, awaiting maturity of the debt, calls for investment management and expense and is subject to the risks of loss.

The adoption of any plan for retirement of debt and the choice of a particular method are matters of general policy to be determined under many varying circumstances. The investment banker ordinarily gives valuable advice which the directors or

managers must correlate with what they understand to be the necessity and advantage of their company.

INTERCORPORATE RELATIONS

The forces of economic law over the past half century have tended consistently toward larger units of business. For a time increased size was attained by the use of the corporation instead of the partnership or individual proprietorship organizations. The desire of many organizations to control markets and sources of raw materials and to concentrate the profit-taking developed pressure for bringing the competing enterprises into some unified system of operation. Working agreements with other business enterprises for the unification of their joint operations have been given the title of intercorporate relations. Various methods have been evolved for effecting such a unity among organizations. These methods may be classified as (1) personal relationship or (2) legal relationship.

Personal Relations

In the instance of personal relationship, the results are obtained by a so-called gentlemen's agreement, an informal understanding as to how each firm will conduct its own work in reference to the work of the other business organizations. The agreement may cover a division of the market, for example, or the establishment of a quota in the common markets for each business firm. Such a relationship has sometimes been effected by the interlocking of directorates, in which case the same men are elected directors in a group of corporations and are thereby enabled to determine the actions of any one concern with reference to actions taken by the other corporations. A third personal relationship is known as a community of interest, in which situation the owners hold substantial interests in several concerns. The policies of one concern, therefore, are not allowed to conflict severely with those of another concern where both are held by the common ownership. Likewise one concern usually favors the purchase of the products of the other where both buyer and seller are controlled by persons with a common ownership interest. An example of such a situation may be found in the transportation contract and

power contract entered into between the Montana Power Company and the Chicago, Milwaukee, and St. Paul Railroad Company beginning in 1912. According to the evidence placed before the Interstate Commerce Commission in its hearings on the receivership of the road in 1915, in this agreement for power the railroad agreed to pay burdensome rates and to buy amounts of power far in excess of its requirements. However, such collective operations are not necessarily unfair and expensive for the participants as they apparently were in this transaction.

Legal Relations

What might otherwise be only a loosely joined group of competing companies becomes amalgamated through such legal relationships as (1) formal pooling agreement, (2) voting trust, (3) lease of properties, and (4) ownership of securities in a second concern.

Pools.—In a pooling agreement the independent concerns contract to join in some particular phase of their common interests and to divide the total results according to the agreement. A common illustration is that of the patent pool, in which each of several concerns agrees to make its patents available to the other firms. This has been practiced extensively in both the automobile and the radio industries in the past decade.

Voting Trusts.—A voting trust, on the other hand, is a legal contract whereby the owners of stock in one or in several concerns agree to surrender the stock to a group designated as trustee, for which the trustee issues trustee certificates as evidence of the deposit of certain stock. The certificate states the right to receive dividends and the manner of distribution in the event of dissolution. The trustees receiving the deposited stock naturally gain the right to vote such stock, and thereafter they vote the stock involved in the trust as a unit. This form of relationship was set up in the process of organizing the International Harvester Company² and has been employed in numerous receivership proceedings, as in the case of the Atchison, Topeka, and Santa Fe Company.³ The present certificates of the Cream of Wheat Company

² A. S. Dewing, *op. cit.*, 1934, p. 391.

³ *Ibid.*, note 2, p. 393.

now outstanding are in the form of voting-trust certificates which provide for the deposit of all capital stock with three trustees and is effective until 1939. Such a trust is illegal for purposes of monopoly control.

Leases.—The leasing of property of one concern for use by another, too, is a very common procedure in modern business, especially in the railroad field. By this device almost all railroad systems are made to possess a unity in operation and general policy. These leases are usually of the long-time variety, so that policies developed in the unified business will not be quickly terminated by the sudden expiration of the lease. In the case of the Boston and Albany Railroad Company may be found an example of such lease arrangements. This company is operated by the New York Central Railroad Company under a lease made in 1900 for a period of 99 years, at a cash rental of \$2,000,000 a year, equaling 8 per cent on the capital stock in addition to payment of the interest on all bonds, rentals of leased lines, taxes, and organization expenses.

Security Ownership.—The fourth legal relationship, that of ownership of securities in another concern, may be formed for the purpose of investment only, or for the purpose of exerting some definite influence on the policies or operations of the other concern. In the latter instance a concern that holds securities of another but does not hold control in the board of directors is known as a *parent* company, and the other concern is referred to as an *affiliated* company. The Pacific Fruit Express Company, the entire capital stock of which is held in equal amounts by the Union Pacific Railroad and the Southern Pacific Railway, is an example of an affiliated company. This express company is engaged in supplying the refrigerator cars used by the two railroads and maintaining the necessary icing stations along their routes. The same services are made available also to other railroads. Whenever under a like case of security ownership the parent company has a controlling position in the board of directors, the concern so controlled is referred to as a *subsidiary* company. The Oregon Short Line Railroad Company, the entire capital stock of which belongs to the Union Pacific Railroad Company, exemplifies a subsidiary company. In these connections, we find the term *holding company*,

which, strictly applied, refers to a company that holds securities in concerns that are its subsidiaries and does nothing more; that is, it is not engaged in actual production. A typical holding company will be found in the case of American Power and Light Company, which owns the controlling interest in a great number of utility companies operating and servicing local communities. Among the companies so controlled are Florida Power and Light Company, Minnesota Power and Light Company, Montana Power Company, Pacific Power and Light Company, Nebraska Power Company, Washington Water Power Company, Texas Electric Service Company, and Texas Power and Light Company. Often a company which engages in production, being known as an operating company, also is a holding company in relation to a number of subsidiaries. The greatest development of this relationship has been in the public utility field although it has also become prevalent among the railroads. Four utility holding companies in the United States today control a substantial part of all the services sold.⁴

These arrangements, of course, are made to increase earnings. The increase is expected to arise from economies that a company hopes to effect by a control over one of the factors of production, marketing, or finance, or a combination of them, so that waste and overlapping of operations will be eliminated. Obviously these may be legitimate objects not involving any attempt at monopoly. On the other hand, the objective may be a monopolistic control of price, though it is an illegal one.

Financial Problems

The chief financial problems created by any of these methods are in connection with the lease or the security ownership forms. In the case of the lease arrangement, the amount and method of determination of the rental are the principal questions. Since rentals are a form of fixed charge, a firm may engage wisely in such an arrangement only if the charge is well covered at all times. Security ownership requires the financing of the outright purchase. The use of collateral trust bond issues, especially in connection with holding company situations, has gone a long way in

⁴ *Moody's Manual of Investments—Public Utilities, 1936*, pp. 143-146.

making this financing easily accomplished. It is this easy method, however, that is now bringing such serious results to holding company concerns. They have used the financing device so extensively that, like individuals who have overextended their buying through installment sales contracts, they find themselves dangerously near defaulting their obligations.

In the relationship of parent and subsidiary concerns, very helpful financial arrangements can be made, and this is often the chief motive, other than profit, for the holding company. A well-established or highly regarded parent concern can give experienced advice in all matters that should make for better financial results from operations. But more important, in the course of raising capital, it is found that a security of the parent will sell much more advantageously than an issue by a subsidiary, because the parent is larger and better known. In such a situation, the subsidiary can issue its securities to the parent, which in turn issues its own security to the public. A better sale results, usually at much lower interest rates. The American Gas and Electric Company may be used to illustrate this point. Within a four-year period just prior to 1934, about 70 per cent of the funds required by the companies which it controlled were supplied by the advances of the American Gas and Electric Company. The debenture issue of the American Gas and Electric Company was outstanding at the rate of 5 per cent interest while a number of the smaller controlled companies had outstanding debentures on which the rate was 6 per cent and in a few instances 7 per cent interest. While this is a legitimate use of the relationship, heavy loans are frequently made between the controlled companies without their being well secured. By causing the better concerns to finance the weaker ones by intercompany transactions, the parent concern may thus keep an entire holding structure together when parts of it are unprofitable and deserve to be abandoned. An illustration of such a situation is found in the Middle West Utilities Company prior to its bankruptcy in 1933.

PROTECTION AGAINST RISKS

A partial or complete destruction of the capital committed to a business would be a serious event. Such a loss of capital may occur because of a great number of risks to which the business is

exposed. Some risks may be created by natural forces such as fire and wind, others by economic forces such as price changes, and still others by the judgments of the managers themselves. The preparation made to minimize the effects of these risks is a policy that should be carefully considered since no business can afford to lose its capital. The risks, being different in kind, clearly call for various methods to be used in preparing to protect the business. The judgments of the managers usually can be guarded against only by the men themselves. Price changes cannot be completely guarded against, but they can be lessened by accurate information and in part by contracts which shift the immediate risks to others, as do long-term contracts for supplying raw materials to a plant.

Insurance Companies

The risks created by nature can be insured against with more success than some of the other risks. These risks can be shifted in many instances to the insurance companies.⁵ Such companies are specialists in the work of assuming risks; the risks are not eliminated but are shifted to experienced operators. By application of the mathematical law of averages, the knowledge possessed by the insurance companies permits them to predict the amount of

⁵ These policies cover risks in the following fields:

1. Fire (with hail, windstorm and lightning amendments)
 - a. Destruction of the property
 - b. Use and occupancy (loss of rents)
 - c. Profits (loss of profits while inoperative)
 - d. Water damage (loss suffered from sprinklers)
2. Casualty
 - a. Automobile (personal, property, and collision)
 - b. Plate-glass (store windows)
 - c. Burglary and theft
 - d. Public liability (contractors, building owners)
 - e. Workmen's compensation
 - f. Accidents (carried by individuals)
3. Credit, fidelity, and surety
 - a. Credit (losses by bad debts)
 - b. Employee and official bonds
 - c. Title insurance (property titles)
4. Marine
 - a. Sinking, stranding, burning, collision
 - b. Piracy, mutiny, barratry

loss in a total quantity of assets exposed to the risks. The insurance company, therefore, gathers from all its assureds sums called premiums, which amount the law of averages shows to be ample to cover the probable loss on the risks insured. The insurance company in the meantime keeps the premium funds invested, awaiting the time when the money may be needed to pay losses. It was pointed out in Chapter VI that the insurance companies in this way become financial institutions in that they gather together capital and make it available to business for use in enterprise.

Instead of resorting to insurance companies for protection, the companies themselves frequently make definite allowances for their own probable losses. Instead of purchasing contracts from the insurance companies, they set aside insurance reserves. This policy may be recommended where the risks are widespread and about equal in amounts. In any event the need for preparation to offset all these risks is urgent.

S U M M A R Y

Credit.—The management and control of mercantile credit is highly important to each business firm in the United States because it is estimated that 75 to 80 per cent of the transactions involve credit in some form. A considerable part of this credit is the mercantile credit granted by the seller to the buyer in the form of book accounts. The determination of the amount of credit which a firm can afford to give its customers is one matter, while the amount of credit which a particular customer deserves is quite another.

The most important elements of policy affecting credit are the granting of credit, the analysis of debtors' financial position, the terms of the credit, the supervision of the accounts, and the collection of outstanding debts. All these policies are applicable to the management of credit in any form, but they are especially pertinent to the problems of mercantile credit operations.

Retirement of Debt.—Preparation for the retirement of debt derives its importance from the fact that earnings are usually unstable, being more so in some industries than in others. To insure that this fluctuation of earnings will not embarrass the company

in the discharge of its debt, managers make various arrangements to retire the debt. Some of the important plans for debt retirement are redemption, conversion, serial maturity payments, and sinking funds.

Intercorporate Relations.—Many business firms come to be closely associated with other firms by virtue of some common controlling interest resting in the same individuals or companies. These relations may rest upon either personal or legal agreements. In connection with such relations between companies are found various technical terms such as *affiliated*, *subsidiary*, and *parent* and *holding companies*. It is through these relationships that the business seeks to establish various competitive and profit advantages.

Protection against Risks.—Measures must be taken to compensate for the many risks to which business is exposed. Probable losses to be guarded against arise from such natural causes as fire; from such economic causes as price changes; and from such personal causes as the manager's errors of judgment. These risks are assumed by the businessman in the expectancy that the profits will pay for the losses created by the risks. In some cases the risks can be shifted to specialists such as the insurance companies by the purchase of the insurance contract. The important character of the insurance companies in the economic structure indicates the extensive use made of their service in this country. As for other risks which are noninsurable, the management may seek to lessen them by careful study of facts and by control of the firm's exposure to them.

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P R O B L E M S

1. What are the two general types of risk in business? Explain why one type may increase to a greater degree than the other. What are some ways of controlling risk?
2. Is risk an element inherent in business transactions? Explain. Does a competitive system tend to lower the number of risks? Why should this question now be so important to American business?
3. How do the terms of credit granted and received by a concern influence its capital requirements?
4. What sources are available for securing credit information? How may a firm do a great deal of rating for itself?

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5. How are collections related to the budget, the granting of credit, the use of the commercial bank?
6. Does a firm always need to plan to retire all debt? Explain your position.
7. Compare the different methods of debt retirement from the borrower's position. From the lender's.
8. Explain why conversion clauses are attractive at one time and not at another.
9. What motives apparently cause the combination of business units?
10. How does the financial problem differ in the various forms of corporate relations?
11. Is risk eliminated by the individual who insures, or does he shift it to society? Explain.

CHAPTER X

FINANCIAL POLICIES: INCOME AND DIVIDENDS

Obviously important as is the task of producing income for a business, business management must also give attention to the proper determination of profit, and must establish policies regarding the application or disposition of profit.

DETERMINATION OF NET INCOME, OR PROFIT

Income, or revenue, it should be recalled, is the cash and claims against others acquired by the business. Profit, or net income, is that part of the income from all sources which remains after deductions have been made for all expenditures incurred. It is in the careful distinction between the various sources of and deductions from income that important business problems arise for the consideration of the business management. The exact form in which the financial items are to be accounted for in the computation of net income was discussed under the heading of the income statement in Chapter IV. At this point there remain to be discussed the matters of policy that influence the determination of net income.

Source of Income

The usual source of income to a business is the operation of its productive facilities, but income may be derived from outside operations. This is demonstrated by the case of holding companies where the income is entirely from dividends and interest paid by the operating companies. Income may be received, in addition, from investments of excess assets such as working capital placed in stocks, bonds, or notes of other concerns. This excess of working capital commonly exists in an off-season period. These sources of income should be carefully set out as distinct items in any income statement since in no other way can the management intel-

lently conclude whether the results from operations and in investments are satisfactory.

Operating Ratio

The operating ratio is a valuable index to the degree of efficiency with which management is controlling its direct operating expenses in comparison to the volume of sales. In order to prevent any misinterpretation of the ratio, therefore, the accountant should include only income from sales. Charges for taxes and depreciation influence the operating ratio, but if the ratio is to be used as a guide to management efficiency, these items should not be included in operating expenses because they are matters not within the immediate control of the management.

Repair Charges

In the making of deductions from income one of the chief matters to be examined is the proper allowance for and entry of maintenance and repair charges. A business should consistently keep maintenance and repair work at a high point. Slackness in pursuing this policy is certain to cause increasing operating expenses, in the form of power consumption, accidents, and delay. Continued postponement of repairs may severely handicap the plant in the amount of its workable physical equipment when the demand for quantity production comes. Frequently the expenditure for repair work is charged to the capital account rather than to the current operations statement, but this can be properly done only when the charge is for something more than maintenance of equipment in efficient running order. An instance of improper charges is the case of the Chicago, Milwaukee & St. Paul Railway Company in connection with the construction of the Puget Sound Railroad from 1909 to 1916. If the expenditure is to be charged to capital accounts, the asset should have increased in serviceable life or a marked reduction of costs in the use of the asset should have resulted.

Understatement of maintenance charges in the determination of net income gives a higher figure for net income than the facts warrant, while an overstatement of maintenance charges understates the full amount of the net income. The former course leads to payment of dividends at times when payment would better have

been postponed, while the latter course leads to what is known as a *hidden reserve*. In the latter case, stockholders may sell out because of the poor showing in net income, leaving those who are more fully cognizant of the situation to purchase the stock at lower prices than the real net-income warrants. An illustration of this is found in the statements issued by Allied Chemical & Dye Company prior to 1934. Because of these possibilities sound and fair policy requires that the full cost of maintenance be added to operating costs regularly, and that only charges for actual improvement of the assets be entered in the asset accounts.¹

Evaluation Reserves

A second general matter of importance in making deductions from income to determine profit is concerned with that series of evaluation charges or reserves covering such current losses of value in the assets as *depreciation*, *depletion*, *bad debts*, and *inventory losses*. In case any of these changes arise because of extraordinary losses of value, such as loss of uninsured inventory or loss of deposits in a bank failure, they should be charged against capital, usually the surplus account. This composition of the reserve is desirable because reserves are regarded as merely estimates of the loss in each period. The net income of any one period, therefore, should not be raised or lowered suddenly by charges that are caused by other than the usual forces which create predictable losses incident to regular operation.

Many managers consider that deductions or evaluation reserves can be offset by later increases in value, and that where this possibility exists no charge into reserve is necessary. The truth is that the losses in value arising from these various phases of operations are constantly incurred, though the ability to make a current contribution to the reserve may vary greatly from year to year. To follow conservative policies in the determination of net income, since the reserves must be accounted for at some time in the financing of the concern, the management should deduct them annually from income, so that all periods are comparable.

A true statement of the net income of the business results only when the distinctions and deductions just mentioned are

¹ See W. A. Paton, *Accountants' Handbook* (2nd ed., The Ronald Press Company, 1932), pp. 988-89.

handled correctly. This determination of income is of such importance to all interested in the financial results of the concern that only straightforward statements of the facts should receive support.

A P P L I C A T I O N O F N E T I N C O M E

After the net income is determined in accordance with the policies just outlined, it might appear that the amount would be immediately available for dividends. As a matter of fact, however, there are many uncertainties present in all business that might well be provided for in some way before dividends are declared. The more conservative firms recognize such uncertainties as new kinds of taxes, and first apply a portion of the net income to reserves for various contingencies.

The reserves for contingencies are not the same as those referred to in connection with depreciation. Depreciation is considered as a required withholding of income in order to maintain a regular level in the capital values of the business, while the reserves here suggested are optional with a management as a way to apply the net operating income.

Contingency Reserves

Typical uncertainties covered by contingency reserves are the acquisitions of funds for expansion, for maintenance of an established dividend rate when current net income is insufficient, for redemption of the funded debts in whole or in part, and for purchase of new equipment when the equipment on hand, though still operating, has become obsolete or old-fashioned.

Many of the most conservatively managed concerns have had long-established policies of setting aside a certain percentage of the annual net income for the various contingencies. The U. S. Steel Corporation has followed the policy of setting aside a 50 per cent reservation for the contingencies of the company and of paying the remainder of the income to the stockholders as dividends. The Pennsylvania and Burlington railroads have made large contributions to the capital improvements of their systems by application of substantial parts of their annual net income. One may

notice the general contingency reserve carried in the balance sheet of Armour and Company on page 66.

Dividends

Since payment of dividends, or distribution of profit to owners, is the ultimate object of a business enterprise, a large portion of net income is usually applied in this way. The responsibility for making any payment of net income for a corporation, however, is entirely within the discretion of the board of directors, regardless of the class of stock involved. So many considerations may influence the distribution of dividends or profits that stock-holders, for example, must rely upon the directors' judgment so long as they do not abuse the power. It is for this reason that some well-defined policy governing the payment of dividends or profits should be formulated by the directors and made known to stock-holders, or capital contributors. The discussion which follows is directed towards corporate dividends because such an important portion of all business profits are paid by the corporate enterprises, and because special devices are involved. To illustrate the amount and relation of profit distributions, the income tax reports for 1927 show that individuals received 3.2 billion dollars from proprietorships, 1.7 billion dollars from partnerships, and 4.2 billion dollars from corporate dividends. All corporate dividends in the same year amounted to over 7.1 billion dollars, the remainder after distributions to individuals being paid for the most part to such investment institutions as the insurance companies and investment trusts.²

Cash Dividend.—Although dividends may be paid in a variety of forms, they are usually paid in cash. Cash payment, however, creates a special problem for the business because it necessitates a rather substantial loss of cash from working capital. The working capital must be handled in such a way as to make the burden as light as possible and to prevent interference with any of the regular business operations. The irregularity of dividend payments has been much reduced in late years by abandon-

² *Statistical Abstract of the United States*, United States Department of Commerce, 1932, pp. 176, 187.

ment of annual dividend declarations in favor of the system of quarterly payments.

Dividends are, of course, payable only out of net income, but the payment is not restricted to the amount earned in any one year. If a surplus of a previous year is available it may be drawn upon. For example, the Pennsylvania Railroad directors used \$34,000,000 of their surplus in making the dividend payment in 1931; as did the U. S. Steel Corporation in drawing upon surplus in years from 1931 to 1935 for preferred stock dividends. When dividend payments are to be made, it may be unsafe to deplete the working capital and as a result the business may be forced to borrow temporarily. Though borrowing for the purpose of making dividend payments is a legitimate procedure, it is not to be recommended. It is much better to maintain a reserve—invested in marketable assets, rather than carried in the general assets of the business—for a dividend fund.

Stock Dividend.—Next to the cash dividend, the most common form is the stock dividend. In this case, each stockholder receives an additional number of shares or a fraction of a share for each one he holds. At the end of 1936 a number of stock dividends were declared by such business concerns as Safeway Stores, Inc., and Chesapeake & Ohio Railroad Company. Until the past few years stock dividends were rather unusual and were voted only at infrequent intervals. These infrequent stock dividends came to be labeled "melon-cutting." More recently some firms have used stock dividends regularly, either as the sole distribution or as a supplement to a small cash dividend. An example of this policy is found in the declarations of the North American Company and of the American Gas & Electric Company. This dividend in stock is probably more acceptable to a stockholder than a sudden large but infrequent declaration of dividends. The "melon-cutting" policy has invited manipulation of the stock by those who are on the inside, and is likely to be so regarded by the stockholders even though the facts may not warrant it.

A stock dividend creates additional stock contracts against the firm for a corresponding volume of asset values withdrawn from the surplus account of the business. In other words, no change is produced in the assets, and no fiction is produced in the

capital account, for the management has gradually accumulated the values by withholding from distribution a part of the total net income each year and carrying it into the surplus account. This procedure has often erroneously been called "watering" the stock issues of a firm. The new stock could be "water," of course, if the surplus had been supplied, for instance, by mere write-up of the assets to some new appraised value. The stock thus created represents no value contributed to the business.

The chief business problem produced by a stock dividend arises out of the consistent addition to the volume of stock. This causes the total amount of cash dividends to mount heavily if the same rate of payment is continued. A few firms have adopted this form of dividend as a regular policy because all available income is desired for use within the business, probably for expansion, but they desire to make a distribution to the stockholders. This is the reason for the policy followed by the North American Company. The stockholders may sell these stock additions and receive cash for them at once, or they may hold them for future cash dividend distribution.

Scrip Dividend.—A less common type of dividend is a scrip distribution. The declaration of dividends in this form creates a promise to redeem the scrip certificates issued to the stockholder. These certificates are evidence of the amount and kind of the dividend due upon the stockholder's stock. This scrip is usually transferable and the stockholder may sell it if he can find a buyer. Scrip certificates usually bear no obligation to pay interest and no maturity date for payment, but the directors may add such promises if they wish. This case is illustrated by the declaration of the Fox Film Corporation in 1930 of the quarterly dividend for the end of 1929 at \$1 per share due in one year with 6 per cent interest.

Property Dividend.—A less frequent form of dividend is the property dividend, in which case the distribution of the property held by the concern is made in equal units per share. This situation is usually incidental to dissolution; even in that event it is uncommon because most property is difficult to divide into equal small units. A sample of such a dividend policy is offered in the distribution in 1935 of Radio Corporation of America shares to the stockholders of General Electric after the government had

ordered the latter company to dispose of its holdings in the radio company.

Dividend Policy

The size and regularity of dividend declarations over the years is a matter of much importance to a concern even though the effects are largely indirect. Regularity of dividend payments is reflected in the relative constancy of market price compared with stocks which have shown no regularity in dividends. The market behavior of a stock gives it a reputation as an investment stock or as a speculative stock. This classification by the market bears strongly upon the range of price fluctuations of the stock and determines the way in which subsequent offerings of stock issues are received.

Regularity of dividend payments wins the confidence of the stockholders, and the company profits as the market price reflects this confidence. When he sells his stock the stockholder is usually able to obtain more than he paid for it, and he will continue to regard the company well when he invests again.⁸

If regular dividend payments are to be made the directors must, of course, take great care to see that early payments are not set so high as to force discontinuance of payments in times of adversity. It is generally better policy to maintain a small dividend than to pay a higher one that must subsequently be reduced, if not altogether discontinued. The reserve to cover dividend fluctuations, referred to earlier in the section, is very valuable in accomplishing this result. When a regular dividend policy is decided upon it is usually desirable to announce it publicly, for if the policy is known the market will be less subject to fluctuation. Manipulation based on the uncertainty of forthcoming dividend payments, always one of the factors in wide fluctuations, will be clearly avoided.

S U R P L U S

The third general application of the net operating income is to the surplus account. Even though firms have made reservations for contingencies, the directors are ordinarily reluctant to dis-

⁸ See A. S. Dewing, *op. cit.*, p. 625.

tribute the remainder as dividends. If they were to do so, they would violate the principle of regular and consistent payments.

Net income is only one of several possible sources of the surplus account. There are other sources, such as (1) sale of fixed assets at a profit, (2) premium paid on stock by subscribing stockholders, (3) donated assets, and (4) reappraisal of assets. These additional sources of the surplus account are carried directly into it, rather than through the income statement, because these values do not arise out of ordinary operations and occur only infrequently. Appreciation of assets is not properly considered a source of income because the values thus created are not realized unless a sale is made at that amount. In other words, the value is not realized in the business so long as the asset is continued in use for operations.

The surplus account is regarded as a bulwark provided against unusual losses that may come to the business. Examples of such losses are destruction of its plant, loss of inventory by flood, and variations in the foreign exchange rates. In order to absorb the inventory, currency, and operating losses that occurred during the period 1930-1933 corporations drew upon their surplus accounts for a total of 19.5 billion dollars.⁴

The surplus account is to be regarded as a most important source for financing additions to the business. As an example of this point the growth of the assets of all corporations between the years 1926 and 1930 required \$72,000,000,000 of new funds, 20 billion of which came from the surplus accounts of such corporations.⁵

Due to the importance of the surplus, business executives allege that business will be severely handicapped by such laws as the Federal undistributed profits tax and capital gains tax.

S U M M A R Y

Though a business has been managed so successfully as to create an income much larger than its direct outgo, the accurate determination of the net income is a difficult financial problem.

⁴ *Statistical Abstract of the United States*. 1935, p. 188.

⁵ *Ibid.*, note 4, p. 248.

This determination involves many policies such as valuation reserves and repair charges. Once this problem has been solved, there remains the matter of applying the operating income to contingencies and dividend payments. The exact form of dividend payments is determined in view of earnings, cash position, need to finance plant expansion, and avoidance of burdensome surplus taxes.

Many of the issues involved in the dividend declaration are likewise a part of the problem of administrating the surplus of the business. Surplus is now and has long been regarded by managers as a protecting element against the unexpected events in a competitive order, as a ready and certain source of working or fixed capital. All these are questions of policy faced by every business and must be solved in the light of both business and social needs.

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P R O B L E M S

1. How can it be explained that a cash increase may not correspond to the profit?
2. Explain the importance of any confusion in the entering of items for repairs and capital additions.
3. How do you distinguish evaluation and surplus reserves?
4. Describe the different forms of dividend payments. Which ones are infrequently used? Why?
5. Are not dividend payments the accidents of good fortune? Do you find any criticism to make of a firm following such a policy?
6. Why do firms seek to keep a surplus? May they keep too much from any point of view?

CHAPTER XI

FINANCIAL CONTROL

If the policies and details of financial management are to be administered successfully, the business executive must have access to reliable tools of control. Available devices of demonstrated reliability are (1) accounting, (2) statistics, and (3) departmental organization.

ACCOUNTING

Accounting may be defined as the science dealing with the principles of recording, classification, and interpretation of financial and commercial facts of a business. The chief divisions of accounting are (1) general accounting, (2) cost accounting, and (3) auditing. The importance of accounting to finance was suggested in Chapter IV, but perhaps the best evidence of its importance is the fact that the various divisions of a business frequently turn to an accountant for assistance in management problems.

Definitions

General accounting consists of the recording and classification of facts for general records and for preparation of the usual financial statements. *Cost accounting* is concerned with the recording and analysis of costs with a view to the correct allocation of costs in the whole to units of product. *Auditing* is defined as the analysis of records already made to determine whether the records make a proper showing of the facts, both as to policy and as to legality.

Since all factors of a business are reducible to monetary terms, it is obvious that to maintain control over such factors the course of events concerning each factor must be regularly recorded, classified, and interpreted. This is the work that accounting in its various phases undertakes to do for management. Management finds the information developed by the accounting work usable for general management control, for financial control, and

for the preparation of financial statements to be used in dealing with creditors, bankers, and stockholders.

General Management Control

In aiding general management control the various phases of accounting may be used to give information on particular departments in order that management can check the success the head of that department is having in meeting instructions or requests given him. The sales results of each salesman will be compiled through the accounting system for the use of the sales manager in determining which men need closer supervision. The results of sales in various territories of the entire market likewise may be classified in the accounting department so that the sales manager may know upon what districts to spend extra energy. Essential information from all parts of the business can be given the managerial heads so that they may be informed of those matters needing attention and of those policies that are proving successful.

Financial Control

Accounting can definitely assist financial control by computing results in various matters that may be compared to "standards" for similar business concerns, or to those "standards" that the business has set up within itself. The operating ratio, the financial ratio, turnover of inventory, turnover of capital, and cash to total working capital are typical "standards" that the manager needs in order to gauge the financial progress of a business with accuracy. These measures are of prime importance because in the competitive fields, especially, it is not sufficient to be able to operate a business as it was operated in previous periods. If it is found that its competitors have succeeded in finding better combinations of the business factors so as to operate profitably under the guidance of a better set of "standards," the original concern must adapt its policies to the better standards or suffer competitive disadvantages.

STATISTICS

General Nature

The data given to the executive by his accounting system may be assembled and compared in a great number of ways, and compared and contrasted with similar data from other sources. Statistical reports, like accounting records, may present data in monetary terms, but more frequently they deal in such physical measurements as tons, pounds, carloads, number of customers, and the like. The steps involved in the collection and presentation of such data constitute the technique of statistics. Statistics may therefore be defined as the science of collecting, analyzing, and presenting quantitative data. Because of the great volume of data in the modern complex world, and because of the constant necessity of referring to quantitative data, the statistical specialists have become important workers in the business world.

Statistics is important to business since it is used to present in concise form the essential facts which compose the basic elements of business policies. Suppose a business is involved in the problem of purchasing a year's supply of raw material. Questions immediately arise as to the amount of the daily receipts, the daily production, the supplies in storage. The sources of the raw material and the amount of the present supply compared to that of other years must be ascertained. What is the present volume of demand compared to normal use? What has been the movement of prices through the course of the year? All these questions can be more precisely presented through statistical devices than through the mere observation of a series of unorganized facts.

Whenever business data are assembled and classified it is found that all of the items do not fall within one classification—as to time, size, or value—that, in fact, the data distribute themselves widely. Thus the dresses which are sold or made are not usually in a single dress size but are scattered throughout a range of sizes; the same is true of the amount of individual sales. The frequency with which the data falls within various classifications, say as to size of each sale, cannot be used conveniently until some representative of the whole picture is devised. A number of methods for selecting a representative has been developed by statistical science.

Averages

Thus if the business is analyzing the sales made by individual salesmen it is frequently difficult to compare them. Such is the case when a whole series of sales figures for one salesman ranges from 5 cents to \$964.38, and for another the figures range from 25 cents to \$792.01. A representation of this series by an average is a typical statistical method used to express the comparative data more easily. This average indicates the central tendency with which individual items can be compared. There are many different kinds of averages, among others, the arithmetic mean, median, and mode. The common representative is the arithmetic *mean*, in which case the sum of all individual items is divided by the number of items. The *median* is that item which has the same number of items above and below it in the list, or, stated another way, divides the series into two equal parts. The *mode* is that classification within which falls the greatest number of items of the group. Thus a firm may be interested in the \$6.33 arithmetic mean (average) sale of a salesperson, as computed in column A below. These same sales figures arranged in order show \$5.00 as the median, as in column B below. The manager must select the average which represents the facts he is seeking to compare. When a firm desires to know the dress size which should be most heavily stocked, the mode size 16, as in column C below, is the average of most significance. Obviously the arithmetic average size of dress would be meaningless here.

		DRESS SIZE
\$11.00	\$ 1.00	14 16 18 20
10.00	3.85	
9.00	4.50	10 18 12 5
1.00	5.00—Median	↑
5.00	9.00	Mode
4.50	10.00	
3.85	11.00	
<hr/>		
7)44.35	(\$6.33—Mean)	
	A	B
		C

Index Numbers

Index numbers are a second method commonly used for the presentation of statistical material. An index number is designed

to reduce comparable data to a simple form of percentage expression and to show the relative position of each item to a base figure, usually represented as 100. Suppose the business is interested in showing sales volume over the last ten years. The use of the dollar figure is cumbersome and the relationship between \$162,000 and \$191,000 is not clear. When, however, the facts are translated into terms of 100 and set side by side, as in the columns below, the difference is obvious. The degree of change from \$162,000 to \$191,000 is no longer difficult to see, for when 162,000 is represented as 100 and 191,000 is stated in terms of 100 (117), the degree of change is at once apparent.

YEAR	SALES IN DOLLARS	INDEX NUMBER OF SALES
1926	\$162,000	100
1927	191,000	117
1928	211,000	130
1929	200,000	123
1930	195,000	120
1931	180,000	111
1932	142,000	87
1933	111,000	68
1934	160,000	98
1935	186,000	114

FORMULA

$\frac{\text{Sales of any year}}{\text{Sales of base year}} = \text{Index number, or relative sales of particular year.}$

The computation of the index numbers in the case above may be followed by supplying the figures in the formula. Index numbers, of course, are used to present a great variety of data, but this sample should serve to demonstrate their use.

Time Series

Another presentation of data is in the form of a time series. This is a tracing of the fluctuation of items as to size, frequency, and duration in periods of time. Such series are usually pictured in a chart as in Figure 20 which covers the production of steel concerns.

As the chart illustrates, such series develop the movement

of steel production at the various times of the year and show the seasonal variations. Likewise, over a longer period of time, the movement of the whole series to a higher level reflects the secular trend—the long-run tendency of the production volume. Time series are valuable, therefore, in forecasting expected seasonal movements in production as well as the future trend of total pro-

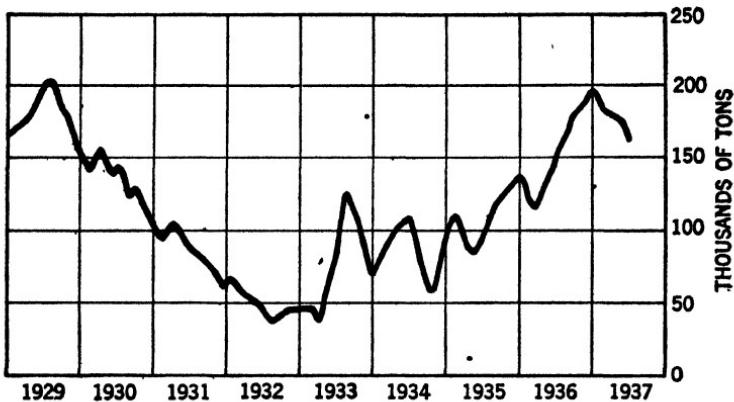


FIG. 20.—Steel production, showing seasonal variation and secular trend.

duction. After studying these movements the management can judge accordingly as to the preparation of its plans.

Correlation

Various statistical correlation devices are used to express another important relationship of data. Correlation is the measurement of relationships among two or more variables. For example, the relationship of a shorter workday to unit productivity of workers might be shown by correlation. Suppose unit output for the same workers is found to be consistently 5 per cent less when hours worked per day are increased from six to six and a half hours. Suppose, too, another 5 per cent loss in productivity is shown if the working time is seven hours. This would indicate that productivity was directly related—or correlated negatively—to each half hour of added work from six to seven hours.

Another illustration is found in the baking business. In this field variations of 50 cents per bushel in the price of wheat are usually followed by a 1 cent price change per loaf of bread. The

DATE	BUSHELS IN THOUSANDS
1928	912,961
1929	822,180
1930	889,702
1931	932,221
1932	745,788
1933	528,975
1934	496,469
1935	633,444
1936	626,179

FIG. 21.—Tabular statement.

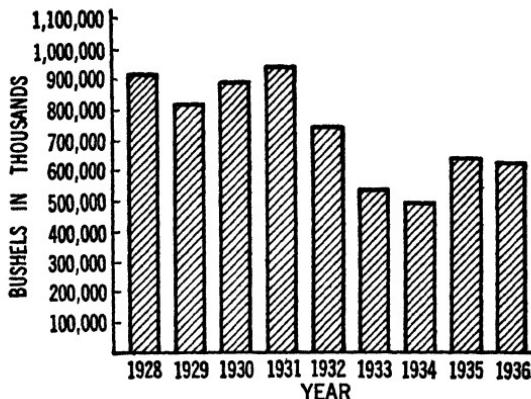


FIG. 22.—Bar chart.

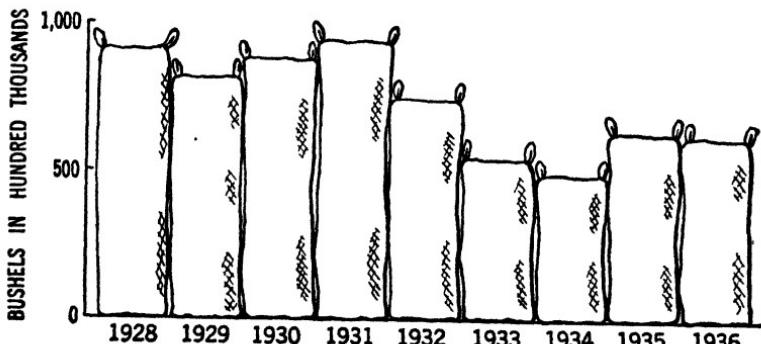


FIG. 23.—Picture chart.

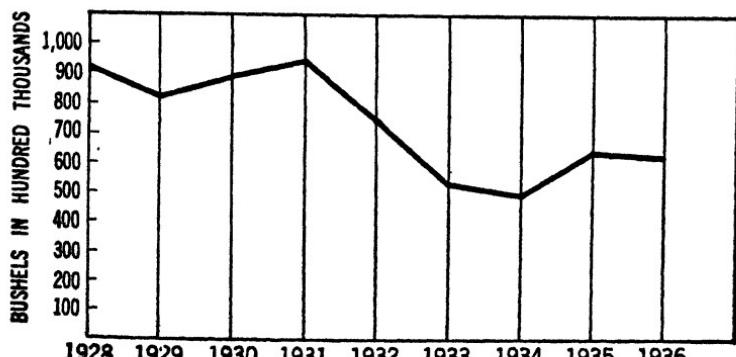


FIG. 24.—Line graph.

decrease or increase of bread prices is in direct relationship to the price of wheat.

Methods of Presentation

The presentation of statistical data offers a special problem to the statistician. It is his job to make these presentations precise, accurate, and usable. Among these forms of presentation are found tabular forms: charts—bar type, pie type, and picture type—and graphs of many sorts. Some of the common forms are illustrated in Figures 21, 22, 23, and 24, each form presenting the same material as to the volume of wheat production.

The science of statistics becomes a more valuable aid to business as the size and complexities of business operations increase and as external influences become more important. Significant facts and relationships, which may be shown by statistical devices, thus contribute to accurate and efficient management. The problem of interpretation, however, can be solved only by logical reasoning.

DEPARTMENT ORGANIZATION

A great deal of the ease and effectiveness of control over the financial matters of a concern will, of course, depend upon the finance department's organization: the way in which work is subdivided and responsibility is placed. A survey of an actual finance department as organized in one of the large companies may serve to illustrate how an organization is set up and to show the relationship between its parts. It should be borne in mind that the case is an illustration, and that other concerns may organize the department differently while still accomplishing substantially the same tasks.

Head of the Department

At the head of the finance department is found one of the chief officials of the concern. Various titles might be given to a person in this position, such as treasurer, comptroller, or vice-president in charge of finance. In general this officer, who has a broad knowledge of financial work, has the duty of guiding the business in all its financial matters: leading in the planning of the

fiscal policies, directing the interpretation of the records, and supervising the finance department itself.

Tasks

The chief finance officer's first duty is that of acting as adviser to the other officials by way of assisting in setting up financially feasible plans. Where the concern is exceptionally large it is common for the major financial plans to be finally approved by a "finance committee" composed of several directors and officers, including the finance head, since it is deemed wise to have the opinions of many, rather than one, influence the important decisions. In this connection, the finance head brings to the problems a general knowledge of existing financial practices in the particular field and in general business. This officer is, in addition, a student of general economic matters influencing the business.

In the formulation of fiscal policies, the chief finance officer is responsible for recommendations on new matters. Often a new condition may necessitate a new procedure in the finances of the concern, and the head of the department leads in making suggestions. When plans have been approved it is the duty of the officer to see that proper preparations are made to secure the necessary funds to finance the plans authorized for the business.

In preparing the budget for the concern, the finance officer is required to lead. Once the budget is adopted, the department will become charged with administering its execution. As was indicated in the discussion of budget making, considerable reliance may need to be placed upon the forecasting of business trends. The finance officer and his assistants must be well acquainted with such work and be capable of exercising independent judgment.

Interpretation of the records is a major task in financial control. From them can be discovered errors made in achieving the present policies, and a close scrutiny of data may suggest new ways of management not originally foreseen. Much can be done by comparison of the present results with those of past periods. It is a task of the finance department to do as much of this comparison as possible. The finance department in turn depends upon the accounting and statistical divisions for much of this work.

Assistants and Division of Tasks

Apart from these various problems, the particular manner of setting up the department and checking the achievements for proper results must be determined by the principal finance officer and his assistants. In all the work, the chief officer relies upon his assistants, to whom he delegates the specialized tasks and questions. In this particular concern the whole department is divided into two parts, one responsible for all recording and the other for all auditing. The assistant officers are variously known as comptroller, auditor, assistant treasurer, and chief accountant.

To the auditing division there falls the general responsibility of verifying the records as to matters of omissions or errors, illegal use of funds, and conformity to general legal requirements of business financial procedure. This division also is charged with preparing the financial statements to be used by the officials and by those doing business with the concern on a financial basis.

In the division of recording there are found three distinct parts dealing with (1) general accounting records, (2) the contract records, and (3) the statistical records. The general accounting work is divided into the parts of sales and overhead, and production and general accounts. In the former field all records of sales, including inventory and customers' accounts, taxes, insurance, and clerical wages and general salaries are set down. In the latter subdivision are found the direct costs in departmental production; employees' accounts, including wages, benefit fund, and savings fund; and the general plant accounts covering interest, cash, notes payable, dividends, and capital accounts.

Within the group of contract records are found the tasks of making and keeping those records pertaining to general contracts and to corporate books. The general contracts include such matters as deeds, leases, purchasing agreements, construction contracts, and insurance policies. The corporate books include the minute book of stockholders' and directors' meetings, the stock book records, including a transfer record, and mortgage or bond records.

The statistical division is charged with drawing up showings of comparative positions between periods, forecastings as to particular matters of the business on the basis of its own experience.

and general comparisons with other concerns in the same field.

By this particular subdivision of tasks a finance department was set up that has been serving its business institution for some twenty years. This method of organization may not continue to give good results, however, as conditions in the business change. It will then become the responsibility of the finance head to re-organize the department to achieve proper results.

S U M M A R Y

In the management of business finances it is found that the principal functions are (1) raising of capital, (2) control of revenue, and (3) control of expenditures. To assist in the accomplishment of these tasks, various documents of finance play important parts. These documents of finance are grouped into two parts: the first, those having to do with the usual financial statements prepared by the accounting division and used in a business; and the second, those having to do with the legal instruments by which both fixed and working capital contributions to a business are shown.

The procurement of capital for a business is dependent, in a very large measure, upon intermediary institutions that are specialized in the respective fields of raising fixed capital or of raising working capital. The sources of capital are very different in that the provision of fixed capital is principally dependent upon savings made by the community, while the provision of working capital is chiefly dependent upon the creation of credit by the commercial banks. Additional assisting agencies such as brokers, factors, and the stock exchange complete the picture of the financial structure.

Apart from the contact that the business enterprise must have with the external mechanism of the financial world, each concern has the question of the internal financial management. Management of these internal problems includes planning for future periods, the loosening or tightening of credit, the retirement of debt, and the management of income. The management of income involves the considerations of the proper determination of profit, and the application of profits to reserves, dividends, and surplus. Other problems exist in the general fields of intercorporate rela-

tions. The financial control of the business through the use of accounting, statistics, and the departmental organization of the financial division is a matter of vital importance to any business.

The careful and thoughtful management of all the varied financial elements places no small burden upon the manager. This is true whether the business be large or small, because all action and result in business have finally to be tested in terms of the financial soundness and profit of the enterprise.

Books

R E F E R E N C E S

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GERSTENBERG, C. W., *Principles of Business* (Fifth Ed.), Chap. XXVIII.
HANEY, L. H., *Business Forecasting*, Chap. II.
RIGGLEMAN, J. R., and FRISBEE, I. N., *Business Statistics*, Part II.
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Articles

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JOHNSON, H. J., "The Importance of Record Control to Executive Management," *The Accountant's Digest*, Mar., 1936, p. 408.
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THOMSON, H. M., "Internal Audits for Trading and Manufacturing Concerns," *The Accountant's Digest*, Dec., 1936, p. 130.
WELLS, R. G., "Cost Control from the Standpoint of the Operating Executive," *The Accountant's Digest*, June, 1936, p. 380.
"The Functions of the Treasurer," *Policyholder's Service Bureau*, Metropolitan Life Insurance Company Booklet No. 2.

PROBLEMS

1. Why has accounting gained such an important position in the field of business? Of what value is it to the manager?
2. Name and describe the different phases of accounting.
3. What reasons can you see for the growth in accountancy as the economic system has reached its modern form?
4. How can proper accounting methods be socially significant?
5. Aside from financial reasons, explain how and why the use of accounting might be expanded in business.
6. Point out specific reasons why a single organization form for a finance department will not be suitable in all cases.
7. What specific tasks fall on the chief financial officer? How are these tasks sometimes divided with other officers?
8. Many financial officials are trained accountants; others are not. Do you see handicaps for both?
9. Distinguish between accounting and statistics. How are they alike? How different? How might knowledge of accounting be helpful to a statistician?
10. Distinguish between the forms and uses of the various statistical averages.
11. What arguments would you use to convince the manager of a steel manufacturing plant that he should employ a statistician?

PART III

PERSONNEL ADMINISTRATION

MOTION PICTURE FILMS

FILMS FURNISHED FREE OF CHARGE

*Source: Nunn-Bush Shoe Company
Milwaukee, Wisc.*

- * \ddagger Fifty-two Pay Checks Each Year (2½ reels)—Employer-employee relations in a modern plant.

*Source: Y.M.C.A.
Motion Picture Bureau
Chicago, Ill.*

- † Behind the Scenes in the Machine Age (3 reels)—Technological changes. Deals with human waste in industry.

*Source: United States Steel Industrial Relations Department
71 Broadway
New York, N. Y.*

- § 1. The Reason Why (2 reels)—Safety practices in steel mills.
§ 2. Why? (2 reels)—Accident causes and prevention in industry.
§ 3. Safety Wins (2 reels)—Importance of safety to young men in steel mills.

*Source: United States Bureau of Mines
Experiment Station
Pittsburgh, Pa.*

- § Twelve Points of Safety (1 reel)—Important safety measures in mines.

RENTALS

*Source: Liberty Mutual Insurance Co.
Park Square Bldg.
Boston, Mass.*

- * Punch Press Safety with Increased Production (1 reel)—Automatic and semiautomatic feeds and power press guards.

*Source: American Museum of Natural History
New York, N. Y.*

- * The Making of a Safe Miner (4 reels)—Dangers of work in mines; safety work.

*Source: Amkino Corp.
723 Seventh Ave.
New York, N. Y.*

- § Problem of Fatigue (6 reels)—Fatigue in industry; nature, effects, and prevention.

*Source: Film and Photo League
31 E. 21st St.
New York, N. Y.*

- † 1. Marine (1 reel)—Living conditions of unemployed seamen.
† 2. No Help Wanted (1 reel)—A day in the life of an unemployed man.

* Available in both 16 and 35 mm.

† Available only in 16 mm.

‡ Sound films.

§ Available in 35 mm. only.

CHAPTER XII

ROOTS OF THE PERSONNEL PROBLEM

Until relatively recent years the greatest part of management's attention and energy was directed toward the solution of material and mechanical problems. This has been not without beneficial results, for we see on every hand the evidence of increased physical production and decreased material waste. However, in the past decade or so, there has been a shift in emphasis from the mechanical and physical problems of business to problems of human relations—a shift that has been brought about by a realization of the importance of employee willingness and intelligence in any system of production. A few years ago employers expended their money and energy directly on a machine for the purpose of lowering production costs. Today they have come to recognize that increased mechanical efficiency may, in many instances, be induced by a more effective application of human power to the machines.

DEFINITION

It is this new emphasis that has encouraged the development of personnel administration as a separate and major department in business. There is little agreement as to the ultimate objectives of personnel administration. Almost everyone has a different conception of it, each expressing his own point of view. For example, one employer may visualize personnel management as a means of securing the greatest amount of work from his laborers in the shortest possible time at the lowest possible cost. Another employer may look upon his personnel department as a means of displacing trade-unions. Still another employer may view it as the most effective instrument for securing a joint working agreement with his employees. From an employee's point of view, personnel administration may be seen as a means of improving the working and living conditions of the working population. A union laborer

may view it with suspicion, feeling that it is nothing more than a subtly vicious attempt on the part of the employer to displace trade-unions in order that he may exploit his workers.

A moment's reflection, however, will serve to indicate the inadequacy of any of these conceptions. Each expresses one point of view only and fails to recognize that the benefits of enlightened personnel administration cannot be confined either to the employer or to the employee. For example, suppose we lighten the burden of too long hours. Will the results be beneficial to the workers only? Obviously not. They will be reflected almost immediately in the improved efficiency and increased productivity of the workers in the factory, office, or retail store. Suppose we increase the working efficiency of our employees, either by improved methods of selection and placement or by training. Will the benefits of this improvement accrue to management only? The answer is again in the negative. Through better selection and training the workers are able to make better use of their talents, a use which will probably be reflected in increased earning power and greater satisfaction from their daily working environment. No definition, then, is adequate unless it expresses the points of view of both the employer and the employee.

While the following definition is not all that might be desired, since it is limited to business and industrial personnel, it will serve our purpose reasonably well. Personnel administration is that phase of business activity that is concerned with the establishment of policies regarding employees, the scientific selection, development, and maintenance of workers, and the co-ordination of their activities in such a way as to secure benefits to the employer, the employees, and society.

Implications

Two implications of importance stand out in this definition: first, that good personnel practice is scientific, and second, that its benefits extend not only to the employer but to the employees and to society as well. The essence of the scientific method is to be found in the discovery of facts through observation and analysis, and in the effective application of the discovered facts to the problem at hand. While there have been many quack devices exploited under the name of personnel administration, and though

there have been many employment managers who have attempted to solve their personnel problems by hunch or intuition, such practices should not be confused with sound personnel management. Doubtless there have been instances in which an employment manager has, by observation of an applicant's forehead, chin, and shape and size of head, built up an efficient and reasonably contented working force. He may have done so by asking questions that seemed to him to have a bearing upon probable success; but if so, it has probably been despite his selection methods rather than because of them. All such theories and methods have been exploded as thoroughly unscientific. The employment manager may depend upon fickle fortune for success, but if he substitutes scientific personnel methods for unscientific ones, he will transfer his selection methods from the realm of chance into the realm of reasonable certainty and greater effectiveness. For example, instead of confronting applicants for a job with any and all questions which may occur to him at the moment, the employment manager can include on the application blank only those questions whose answers have been demonstrated to have a bearing upon probable success on the job.

Employee Benefits.—The second part of our definition requires some comment, for it implies that the benefits of sound personnel management accrue to all parties concerned—to the employers, to the employees, and, indeed, to society itself. That the benefits of personnel administration flow to both the employers and the employees has just been briefly demonstrated. A few more examples will serve to clarify the point. One of the most frequently cited causes of inefficiency is the employee's fear—the fear of unemployment, of industrial accidents, of occupational disease, of being laid off at an early age. Each of these specters can be overcome to some extent by enlightened personnel administration—spreading work and planning production to offset unemployment, safety programs for industrial accidents, sanitation engineering and health education for occupational disease, and better selection, placement, training, and pension systems for early superannuation. That the employee benefits from such provisions is obvious. That the employer benefits through reduced

labor turnover, reduced absence from work, and improved morale and efficiency is hardly less so.

Social Benefits.—Moreover, the community, whether local, state, or national, also reaps benefits from good personnel practice. In the first place, improved selection, placement, and training are conducive to greater happiness and satisfaction for the workers who constitute such a large part of our society. And it is almost axiomatic that the community in which the workers are most content is the community with the firmest foundation of human relationships. In the second place, society benefits from a steady flow of goods produced at a lower cost, which in the long run is translated into lower consumer prices.

THE SOCIAL REASONS FOR PERSONNEL ADMINISTRATION

Industrial Unrest

One of the most serious problems with which our present social order has to contend arises from the existence of industrial unrest. So serious, in fact, is this unrest that those who are responsible for the orderly functioning of the present system view it with alarm. It is no longer considered as evidence of "growing pains" in a new nation; instead it is regarded as an indication of some fundamental maladjustment of our economic structure which, if not remedied, may well result in serious internal decay. Hardly a week passes during which, in some newspaper in some part of the country, there is not a lengthy and sometimes melodramatic report of labor unrest. A strike of the United Automobile Workers in the plants of the General Motors Corporation, a lockout by a Cleveland garment manufacturer, a bombing in a West Virginia coal mine—all are violent evidence of discontent, protest, and open revolt. Factories are closed down, coal mines are vacated, retail stores are closed, and the normal activities of industry and commerce are everywhere interrupted. That these disturbances are costly to both the employer and the employee needs no proof. But unfortunately, with our growing interdependence and complexity, innumerable persons who are in no way responsible for the disputes suffer inconvenience and hardship.

Moreover, the extent and severity of industrial unrest cannot be measured by these concrete expressions in strikes, lockouts, boycotts, and the more dramatic forms of industrial revolt. A much more subtle, if not more serious, type of revolt is continually going on—a type that may escape detection even by supervisors in immediate charge of the workers. Such rebellion finds expression in loafing on the job, conscious waste of raw material, studied inefficiency, willful abuse and destruction of tools and equipment, and many other forms of silent sabotage practiced by workers whose number cannot be even guessed. In many instances, employers, and a public misled by inaccurate newspaper reporting, believe that this expression of dissatisfaction is found only among union workers or members of radical political parties. However, as anyone with even slight industrial experience knows, this is not the case. Sabotage, slacking, and limitation of output are practiced by workers of all types—union and nonunion—Republican and Communist—and by workers in all industries.

More concrete evidence of the existence of unrest is to be found in the numerical growth of trade-unions—those worker organizations designed to improve the terms and conditions of employment and to secure a more equitable distribution of the nation's wealth. From a weak beginning in the second half of the past century, their membership has grown from a mere handful to well over six million.¹

What the Workers Want

The unrest mentioned in the preceding paragraphs implies that the workers have certain wishes and desires that have not

MEMBERSHIP OF AMERICAN TRADE-UNIONS *
1897-1937

Year	Membership	Year	Membership	Year	Membership
1897	447,000	1911	2,343,400	1923	3,622,000
1900	868,500	1914	2,687,100	1929	3,442,600
1903	1,913,900	1917	3,061,400	1934	3,608,600
1907	2,080,400	1920	5,047,800	1937	6,500,000

* Figures from 1897 to 1934 taken from Leo Wolman, *Eb and Flow in Trade Unionism*, National Bureau of Economic Research, 1936, Table 5, p. 16. 1937 figures are authors' estimate.

been fulfilled. What are these desires? What does the worker want?

It may be said at the outset that the question cannot be answered specifically. Proof may be found in an examination of the varied characters, occupations, and backgrounds of our 48,000,000 usually gainfully employed persons. Differences as to sex, age, occupation, nativity, education, and temperament are reflected in a great variety of specific wants, desires, and inclinations. It is possible, however, to give a general answer to our question—to make a list of labor's demands as interpreted from labor's own statement of its aims and policies and its activities in securing these ends.

First of all, the employee wants wages—wages sufficient to buy the necessities of life, to be sure, but he wants more than this. He wants wages sufficient to provide for the education of his children, for adequate insurance, and for his own old age when his earning power will have diminished and, perhaps, altogether disappeared. Nor is this all that the employee expects in wages. There are three additional things. He wants an increasing real wage, with the satisfaction that comes from knowing that his level of living is higher from year to year. That is, he wants the continuously better status in life that can come only through an increase in his yearly income. Next, he wants his wages to be proportionate to his productivity. Like any normal human being, he expects a fair share of the national income. He roughly compares the amount paid out as wages with the shares going to other economic classes and is content only when he is satisfied that an equitable distribution is being made. Finally, the employee wants the increase in his own share of the national income to be relatively as great as the increase in the shares going to other economic groups. This is his desire for proportionate gain.

Second, the employee wants reasonable hours of work. This desire arises from two convictions: first, that there is a maximum number of hours beyond which an employee cannot work without injury to himself and, perhaps, indirectly to his family; and second, that a reasonable amount of leisure time is necessary if the worker is to enjoy the fruits of his labor by both recreation and improvement.

Third, the worker wants improved conditions of work so as

to be free from the risk of industrial accidents, occupational disease, and the fatigue resulting from disagreeable noise and vibration. A wholesome and healthful working environment, he feels, is the least that can be accorded to any human being.

Fourth, the worker wants continuous employment. This demand, of course, includes not only a steady job with a minimum of seasonal unemployment, but also a steady job throughout his lifetime. Obviously, the daily or weekly wage is meaningless until it is translated into terms of yearly income, and in the same way, the yearly income means little until it is translated into terms of life earnings.

Finally, the worker wants a sense of improving status. This may express itself in a variety of ways. He may want a voice in the control of the industry in which he is employed; he may request that he be transferred to another field in which he can make better utilization of his talents and so feel the thrill of creativeness; or he may want an opportunity to advance. But whatever the form taken by the desire, it is always directed toward the acquisition of individual satisfaction and the approval of his fellows. Probably none of the worker's wants has greater economic and spiritual significance than this. At times and for some these desires or wants may not be articulate. Indeed, they may not be recognized by some of the workers, but the effect remains, and failure of satisfaction results in extremely difficult situations.

Such, then, are the social roots of the personnel problem. Obviously, it would be little short of ridiculous to predict a solution of these problems and salvation for modern industrial society solely through good personnel management. The problem is far less simple. However, in recent years, the part played by wise administration of many large corporations in the development of a more genuinely co-operative spirit between employers and employees has been conspicuous. That it may be even more fruitful in the future is to be hoped.

S U M M A R Y

Until relatively recent years most of management's attention has been directed toward material and mechanical problems. There has been, however, a shift of attention to problems of human re-

lationships. Employers are spending an increasing amount of time and money in the selection, development, and maintenance of their workers, and in the direction and co-ordination of employee activities. In other words, employers are attempting to apply scientific methods to their personnel problems. This shift in emphasis has been beneficial to employers, employees, and society.

Enlightened personnel administration is necessary as a means of meeting the problems arising from industrial unrest—strikes, sabotage, slacking, and limitation of output.

Industrial unrest results not as much from the "cussedness" of individual workers as from the fact that workers have deep-rooted wants that are frequently difficult to satisfy in modern industrial society.

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P R O B L E M S

1. Ask five of your friends, not members of this class, for a definition of personnel administration. Write a brief criticism of each definition.
2. "Personnel management is approaching the labor problem from the scientific point of view." Is there such a thing as *the* labor

problem? If so, define it. What is meant by the *scientific point of view*?

3. "Businessmen engage in personnel work because it pays." "Good personnel work is a reflection of an employer's social point of view." Comment upon the truth of these statements.

4. "Personnel problems have their roots deep in the social and economic structure." Give illustrations that demonstrate the truth or falsity of this statement.

5. "Labor unions have been developed and encouraged for the most part by foreign agitators." Can you explain the labor movement on other grounds?

6. "If workers could have what they want, there would be no need for personnel departments." Is this statement true? What do workers want?

7. "The solution of personnel problems is not confined to the development of good personnel practice." Name some other elements of the solution.

8. Prepare a brief outline of the most important points of this chapter.

CHAPTER XIII

THE DEVELOPMENT AND IMPORTANCE OF PERSONNEL ADMINISTRATION

THE DEVELOPMENT OF PERSONNEL ADMINISTRATION

Early Practice

Personnel administration as a separate department of business is of recent origin, but its roots reach far back into history. As early as 1800 certain business establishments, seeing the deplorable conditions under which their employees worked, endeavored to introduce a few crude personnel methods. Outstanding among these companies was the New Lanark Cotton Mills in Scotland under the direction of Robert Owen, who, observing the miserable conditions under which women and children worked, set about to remedy the situation. Convinced that for the most part a person's character is molded by the environment in which he finds himself, he rearranged the interior of the mills, improved lighting and sanitation, applied safety devices to the machinery, replaced old and dangerous machinery, and gave much attention to better training for his employees. He carried his philosophy outside his mills and cleaned up the houses and streets. He established schools for children and stores from which his employees could buy at reasonable prices.

Owen devised what is probably the first system of rating his workers periodically according to the merit of their work. At each employee's workbench was a small block of wood whose surfaces were painted in different colors to denote various degrees of excellence in behavior. The foreman each day would turn the block to a position which would expose the color most nearly describing the behavior of the worker on the preceding day. On walking through the mills Owen could tell at a glance how his workers were conducting themselves.

Although Owen's work greatly improved the welfare of his

employees and increased his profits greatly, his experiment did not enjoy a long life. Because of Owen's paternalistic approach the workers themselves objected upon occasion. His intentions were doubtless above reproach, but his welfare work was introduced more as a matter of charity than business. Then as now, workers frowned upon any activity that indicated either a charitable or a paternalistic attitude on the part of the employer.

Development in America.—In this country personnel work was slow to develop until after the World War. It had its origin in the necessity for co-ordinating a number of movements that were directed toward humane and intelligent utilization of the human element in an organization. Typical movements included the employment management movement, the vocational guidance movement, industrial medical work, the safety-first movement, and the development of scientific management. Chief among these was probably the employment management movement, which was primarily directed toward improved methods of selection, placement, and training of employees. Shortly after 1900 a number of companies began to hire employment managers. These men met locally from time to time to exchange ideas and experiences. The meetings led to permanent associations, the first of which was the Employment Managers' Association of Boston, founded in 1911. The formation of these local associations led to the establishment of national bodies such as the National Employment Managers' Association.

As early as 1914 the Tuck School of Business Administration of Dartmouth College offered training in personnel work as a part of its regular curriculum. The next year saw the introduction of an employment research course in Northwestern University. Many colleges and universities encouraged the growth of personnel work by using their psychological laboratories for research into human traits and individual differences and abilities. Similar investigations were started by industrial establishments. The movement was well under way and was encouraged by the development of such organizations in the personnel field as the National Industrial Conference Board, the Personnel Research Federation, the Taylor Society, and the American Management Association.

Army Personnel Work.—The greatest impetus to the development of personnel work was furnished by the World War. The Allies were forced to create and organize an army very quickly. They sent professional men and skilled workers to the front and needlessly sacrificed a great amount of talent that was needed to carry on the War. Wishing to avoid this mistake, the United States created in 1917 the Committee on Classification of Personnel as a branch of the Army to place every man in a position in which his talents could be best utilized. Intelligence tests, trade tests, qualification cards, rating scales, and many other valuable tools were designed to assist in this work.

The success of the army personnel program was brought to the attention of industrial concerns, many of which, seeing the possibilities of great saving through proper personnel methods, copied the army methods. Since the close of the World War the personnel movement has progressed rapidly in the United States until now the large business enterprise without some organized personnel work is the exception rather than the rule.

THE IMPORTANCE OF PERSONNEL ADMINISTRATION

The business manager's administration of his personnel problems may properly be given as much attention as any other phase of his business. Justification for this statement may be found in two general facts: first, that man represents the primary force behind all economic activity; and second, that the satisfaction of man's wants and desires is the goal of economic activity.

Let us consider the first of our two generalized justifications. A factory will serve as an example. Raw materials must be purchased and stored, equipment and tools must be bought, and sales must be made. The machines must be operated, the finished goods must be shipped, and the accounts receivable must be collected. The successful performance of all of these functions requires a very large amount of material goods and equipment, the cost of which may total hundreds of thousands of dollars, but none of this material or machinery would be of any value whatever as productive equipment if it were not for the presence of man to manipulate and control it. Man's is the directive energy of pro-

duction, and the effective utilization of man power in business constitutes one of the most important functions to be performed. This may be illustrated by citing specific situations.

The Modern Working Environment

If we were able to go back three hundred and fifty years, we should find an apprentice working under a master in a relationship that was congenial, wholesome, and, all in all, satisfactory to both parties. The master clothed the apprentice, fed him, and taught him a useful trade. In exchange, the master received the apprentice's time, energy, loyalty, and circumspect behavior. The master maintained a personal interest in the development of the apprentice, and the apprentice had reasonable assurance of future mastery in his craft and independence. It was a relationship very similar to that which one would expect to find existing in the small shoe repair shop that is operated by the father with the assistance of his son. Here no real personnel problems arise. Each understands the other and each maintains an interest in and a respect for the other's desires. The work is done without the use of "speed up" methods and is free from the confusion of large numbers.

Industrial Labor.—The modern working environment, however, presents a picture strikingly different. The many elements that conspire to strain the relationship between employer and employee are usually conducive to inefficiency and to restricted output on the part of the worker. First of all, modern labor is highly *specialized*. The typical worker in the factory makes only a small part of the commodity being produced. So small may be his part that the worker is able to see little, if any, relationship between his own specialized and repetitive task and the finished product. The worker is denied the privilege of exercising any initiative whatsoever as he stands robotlike before his machine, repeating the same restricted motions hour after hour. It is not surprising that the employer complains that the worker who directs the levers of Machine 229 exhibits no interest in or zest for his work!

Modern factory labor is also highly *mechanized*. The typical factory worker no longer works with his hands or even with

tools. He works with machines. There is, of course, no question about the superiority of machine over man as far as quantity and precision of production is concerned, but the machine is also responsible for some of the most perplexing personnel problems. The increasing number of industrial accidents and the more and more numerous victims of occupational diseases are by-products of machine production. Nervous strain, noise, and vibration, with the fatigue resulting therefrom, are others. Moreover, in mechanized production the worker is subjected to the rigid discipline of the machine. The factory worker no longer regulates the speed of his work in accordance with his physical capacity. Instead, the worker's speed is regulated by that of the machine.

Another significant characteristic of modern industrial labor is *insecurity*, particularly with reference to employment. Our growing interdependence and complexity create a situation in which depressed business conditions in one part of the country or in one industry may spread rapidly to all parts of the country and to all industries. The worker is never free from the fear that the next day will bring notice that his services are no longer required. Only a closed mind can expect a worker to give his best efforts under the constant shadow of unemployment, particularly when he has pressing family obligations.

The typical employee of today is almost completely *without voice in the determination of wages, hours, and conditions of work*. He is told the wages he is to receive, the hours that he will be required to work, and, unless he is granted unusual privileges by his employer, he has no voice in determining the conditions under which he works. He is told what to do, when to do it, and in most instances is instructed in the methods to be used. The employer virtually buys complete control of the employee's working life, allowing the worker to use his own discretion and initiative in matters of minor significance only. The importance of farsighted personnel management in adopting policies that attempt to overcome the resentment arising from this "wage slavery" can scarcely be overemphasized.

Contrary to the current belief, *the status of the average worker is permanently fixed*. That is, the chances that a wage earner or the child of a wage earner will be able to escape from the wage-earning and subordinate class into the independent and

proprietary class are slight at best. The census statistics indicate that approximately 70 per cent of our gainfully employed persons are filling wage-earning and subordinate positions; that 30 per cent are either professional, official, or proprietary.

That it is impossible for the former group as a whole to be absorbed into the latter occupations is obvious. It is impossible to place seventy men in thirty jobs. But, it may be objected, a more important consideration is the chance for the individual wage earner. What are the chances that he or his child will be able to advance? The answer to this question depends upon the opportunity open to him in the event that one of the independent and proprietary jobs is vacated. Consider farming, the professions, or business. Each requires training and capital, neither of which the typical wage earner possesses. Even the child of the wage earner who has an opportunity to earn a sufficient amount to pay his way through a training school may be forced to forego that satisfaction and contribute any surplus he may have to the family coffer. Again, the chance of escape is slight at best.

Realization of the probable permanence of their present status by the workers themselves has far-reaching effects upon personnel problems. Workers, convinced that they have small chance of escaping the confinement of wage labor—those who see only a lifetime of the same monotonous job—are likely to become drudges. The importance of personnel management as a means of introducing procedures to lighten this burden of despair and to overcome this unprofitable industrial indifference should be obvious.

Retail and Office Employment.—Most of the foregoing discussion has pointed specifically to the importance of enlightened personnel administration as a means of meeting the problems that arise from industrial employment. Although the characteristics of employment in retail stores and offices are present to a different degree, the conditions of employment are much the same and give rise to personnel problems no less difficult of solution. Office workers are becoming increasingly specialized and in many instances are tied as closely to office mechanical appliances as factory workers are to their machines. The routine of file clerks, bookkeepers, typists, and comptometer operators creates many problems of

monotony and fatigue. Department store saleswomen are less subject to the monotony of routine, but their work has become increasingly specialized.

Neither retail store nor office employees have any more voice in the determination of the conditions under which they work than have factory workers. There are, to be sure, many employee representation plans in operation in offices and retail stores, but their continuation depends entirely upon the will of the management.

Retail and office employees enjoy very little, if any, more security of tenure than do factory workers. In most instances the opportunities for advancement to positions of greater authority and responsibility are narrowly limited, and the management problems that arise therefrom are as difficult as those arising in the factory.

Improved Efficiency

One of the most apparent indications of the importance of personnel administration in industry is to be found in the need for improving the efficiency of the workers, not only for the purpose of securing lower production costs, but also to improve the quality of workmanship on the commodities produced. With the new and more vigorous competition offered by both vertical and horizontal business combination, it has become necessary for businesses, both large and small, to lower costs of production. In the past, attempts to lower production costs have, for the most part, been directed toward the improvement of mechanical instruments of production. More recently, however, there has arisen in the minds of managers a question as to whether or not this is the only fruitful approach. There is a growing conviction that human power as well as mechanical power offers great possibilities as a variable cost factor.

Productive capacity of the machine is fixed by its physical structure, which, in most instances, cannot be altered without impairing its efficiency. It is constructed to operate at a certain maximum number of revolutions a minute. It is a cold, inanimate, and inflexible piece of steel. Compare these qualities with those of a man. Man is a flexible human being—emotional, impulsive, and capable of reasoning. His productivity is determined

not only by his physical structure, as is true of the machine, but also by the state of his mind. If he dislikes his work or feels that he has been improperly placed, if his carelessness results in injury to himself or to his fellow workers, if he wastes raw material by indifference, poor training, or willful neglect, his cost to the employer is higher than need be. In short, he is a living creature whose employment may or may not be profitable to his employer. His attitudes, habits, and reactions, so important in the determination of his usefulness, are not fixed, but instead are subject to change and control.

Traditional management in industrial establishments, which usually attempted to lower production costs either by improving the efficiency or increasing the speed of mechanical equipment or by depressing the wages paid to employees, failed to see the importance of mental attitudes in production efficiency, and worked under the principle that productivity is largely a matter of physical exertion. Managers relied upon fear and drive methods for increased output, not realizing that aggrieved workers withhold their best efforts and that no amount of driving can induce them to give more of themselves.

Good personnel management, on the other hand, rests upon the assumption that a man's behavior and usefulness can be molded, not by driving, but by reasonable direction and training—that careless workers can be transformed into careful ones, that inefficient workers can be trained to become efficient, that high-cost workers can be made into low-cost ones. If intelligently carried out all through the organization it cannot be doubted that personnel administration is important in this respect.

The Employer's Social Obligation

Not many years ago the typical employer held to the commodity concept of labor—a concept in which the laborer was bought and sold with the same inconsideration as wheat, corn, and coal. The worker was considered to be a mere inanimate element in the process of manufactures, a calculable economic quality which, like all other commodities, constitutes a part of the expense of production. Labor was bought with almost no conception of an obligation on the part of the employer to make the working relationship a human one.

Partly as a result of the growing public interest in employer-employee relationships and a growing disposition to hold management responsible for making these relationships on terms of fairness and harmony, a new concept, the human concept of labor, has developed. The central idea here is that labor is inseparable from the personality of the worker, and that he has all of the instinctive and acquired human traits common to mankind. He has impulses, responses, and, above all, human rights and privileges. He must therefore be accorded the dignity he deserves and be elevated above the plane of lifeless raw materials and machines.

If this new concept is to be applied in day-to-day practice, specialists should advise with and be a part of management in helping to initiate sound personnel policies. They, and they only, can give the attention and energy necessary to an understanding of the workers' problems as human problems. It should not be inferred from this that men in other fields who may perform some personnel functions (production managers, for example) will consciously slight their personnel problems. Their intentions may be of the best and their sympathies broad, but, in the case of production managers, their primary interest lies with the physical process of production so that lesser interests necessarily suffer neglect.

Demonstrated Success of Personnel Work

Probably the best testimony to the importance of personnel management in industry is to be found in the demonstrated success of personnel departments. From an "industrial orphan" whose place in industry was uncertain at best, personnel administration, in a few short years, has taken its place as a major staff department in thousands of business enterprises all over the world. The personnel manager of a few years ago was not expected to have much sympathy for or knowledge of the business affairs of his employer. He was looked upon variously—as "a wart on the nose of management," "a humanitarian missionary among the cannibals of industry," and a person "who thrives by breeding contentment among workers." This attitude, however, has so changed that the personnel manager of today is regarded as a specialized management expert whose work can be translated into terms which contribute at least indirectly to money profits.

TABLE II
PERSONNEL PRACTICE, CLASSIFIED BY FUNCTIONS *

ACTIVITY	PER CENT OF COMPANIES STUDIED			
	Manufacturing	Nonmanufacturing		
		All Non-manufacturing	Insurance Companies	Mercantile Establishments
Employee representation	31.0	28.4	2.6	25.0
Profit sharing	5.0	3.4	..	7.9
Bonus	30.5	13.5	5.1	34.2
Stock purchase	6.0	11.1	12.8	10.5
Training programs	34.2	36.6	25.6	50.0
Medical work	62.3	81.2	89.7	69.7
Safety programs	58.7	56.0	5.1	31.6
Luncheon facilities	37.2	43.2	59.0	69.7
Co-operative purchasing	11.4	8.5	15.4	9.2
Vacation with pay				
Clerical workers	79.1	83.6	84.6	75.0
Wage earners	12.4	48.0	51.3	71.1
Employment tests				
Clerical workers	4.1	2.1	48.7	2.6
Wage earners	14.9	5.3	19.7	7.9
Personnel department	28.8	52.3	71.8	59.2

* National Industrial Conference Board, *What Employers Are Doing for Employees*, 1936, Tables 18-58, pp. 30-67.

Proof of this is to be found in our personnel experience in the depression of 1921 as compared with that of 1930. In 1921, according to Edward S. Cowdrick, many companies curtailed their personnel activities greatly, some abandoning them altogether. In 1930, however, investigation of twenty-four companies picked at random, revealed that:

There has been no general abandonment of modern industrial relations policies. Few, if any, companies have scrapped their personnel programs.

On the contrary, some companies expanded their industrial relations work during 1930.

Few industrial relations men have been released. Turnover among employees of this character apparently has been about normal.

Managing executives are taking more interest in labor administration than ever before in the history of American business.¹

Additional evidence of the success of personnel work is found in the spread of systematic personnel methods into all types of business. Table II shows the extent to which personnel practices have invaded business of various types. The spread of personnel practice into mercantile and office employment is especially noteworthy.

S U M M A R Y

Although crude personnel methods have been used for many years, it was not until the second decade of this century that special attention was given to personnel problems. Personnel management was recognized by universities and colleges as a special field of management as early as 1914, but the greatest impetus to personnel development was given by the emergency created by the World War.

The acceptance of personnel management as a separate department of business is justified (1) by the fact that man is the primary force behind all economic activity and (2) by the realization that satisfaction of man's wants is the goal of economic activity. In an economic world characterized by specialization, mechanization, impersonal relations, subordination of employees, and relative permanence of status this primary force can be more completely utilized and gratification of wants facilitated by intelligent business and industrial personnel methods. The employer who fails to give adequate attention to personnel problems is not fulfilling his social obligation, nor is he taking full advantage of the available information on business practice of demonstrated success.

Having acquainted ourselves with the background of personnel work we are now ready to examine the functions it involves, together with the practices that have been developed.

¹ E. S. Cowdrick, *Personnel Practice in 1930* (American Management Association, Personnel Series, No. 11, 1931), pp. 2-3.

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P R O B L E M S

1. What arguments would you use to convince a businessman that he should install a separate personnel department? Be specific in the reasons for your recommendations.
2. In what ways does modern labor differ from labor of the fifteenth century? How does it differ from early nineteenth-century slave labor?
3. "The modern working environment is not conducive to worker efficiency." Why not?
4. "Personnel management is of greater importance in factory situations than in others." How might the truth or falsity of this statement be established?
5. "Personnel management would be unnecessary in a socialist or communist society." Is this statement true or false? Why?
6. "The employer is obligated to society and must therefore maintain farsighted personnel policies." How would you support this statement?

7. How do you account for the fact that personnel management as a separate department of business did not develop until recent years?
8. Outline the development of personnel management as a science.

CHAPTER XIV

PERSONNEL FUNCTIONS AND PRACTICE

In the first part of this chapter the functions usually performed by a personnel department are to be considered. Two things should be kept in mind: first, that the discussion is in no sense a consideration of organization problems—that is, no attempt is made to suggest how responsibility and authority should be divided between individuals; and second, that a distinction must at all times be made between the functions to be performed and the persons chosen to perform them. In a large organization employing thousands of workers a single person may be assigned to the performance of a single function that consumes his entire working time. In a smaller organization, on the other hand, there may be but one personnel executive who is responsible for all of the functions that in the larger company were performed by a large staff of men and women; and in the very small business the "boss" performs all functions including personnel. It should never be supposed that because a company has but one man giving his time or half his time to personnel functions the number of functions performed is any less or that the personnel problems are less serious. To repeat, our interest at this point is confined to *functions* rather than to persons.

Policy

The primary personnel function is the establishment of a just and definite personnel policy—the development and adoption of a fixed set of principles to be observed by the management in the administration of its personnel problems. Justification for calling it the primary function may be found in the belief that the success of all other functions will depend, in a large measure at least, upon the existence of a personnel policy that is understandable and acceptable to the working force and properly interpreted by all operating executives. If there is to be consistency in management and if the personnel manager is to be able to deal with

EMPLOYMENT DEPARTMENT

ROUTING OF EMPLOYEES

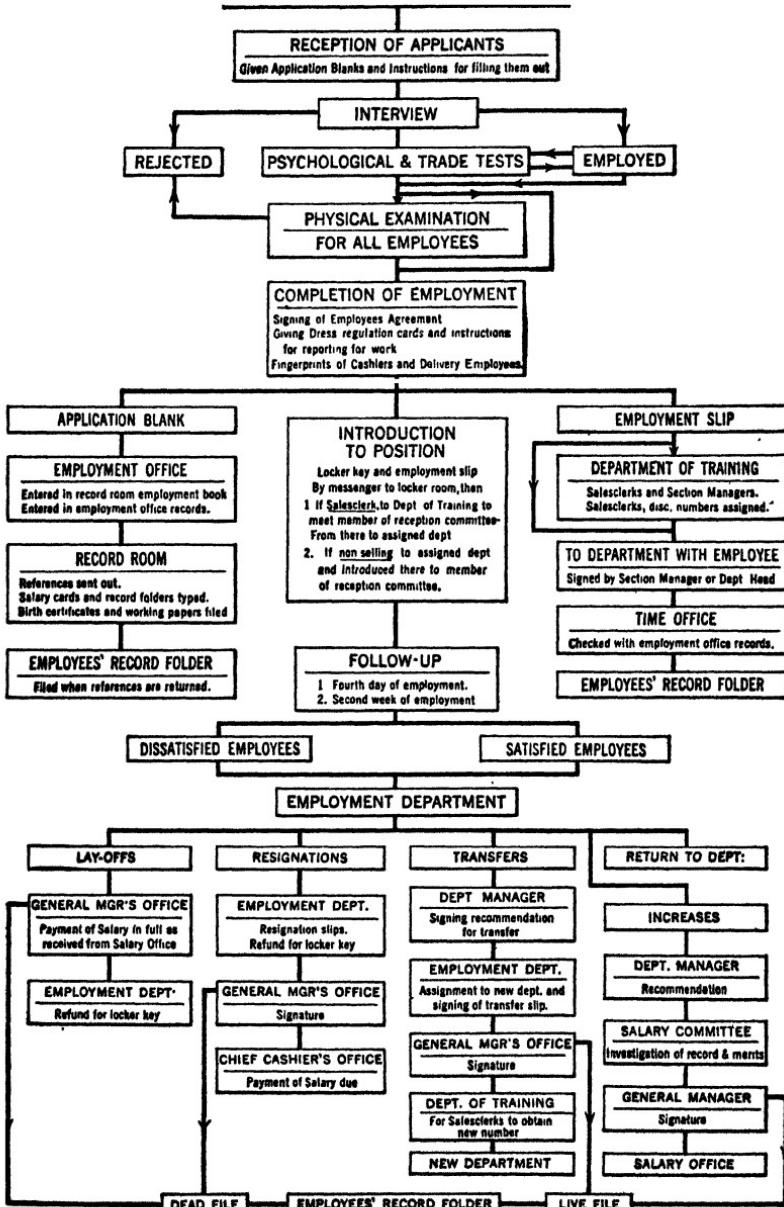


FIG. 25.—Chart showing personnel functions.

his problems in a definite and equitable manner as they arise, some formulation of policies, preferably in writing, must be made.

It should be borne in mind that success of a personnel policy depends upon more than the mere formulation and statement of principles. First of all, the policy must be given effect in all situations. For example, the president of a manufacturing concern announced the policy that any worker having a grievance should feel free to walk into his office at any time to present his case. The fact that only a brash worker felt free to go over the head of his foreman to the president rendered the policy, however well-intentioned, entirely ineffective. Next, the spirit of the labor policy is of much greater importance than the form. Labor policies are inadequate whenever the employer constitutes himself the sole authority of what the worker should and should not have. Failure results also when the policy is inoperative or is unknown to the worker. Finally, it is imperative that machinery be established to put the policy into operation. Foremen, superintendents, department heads, and others working in a supervisory capacity must be educated to the significance of the labor policy. If they are not, it will be ineffective, since each will interpret the policy in his own way or neglect it altogether.

Employment

The second personnel function, that of employment, includes all of those activities involved in the selection, placement, and discharge of the men and women who constitute the working force. Successful performance of the employment function requires a thorough knowledge of the jobs to be filled and a familiarity with the labor market. It involves the selection of workers, proper introduction of new employees to their work, and a careful follow-up of new workers to see that they have been properly placed. Additional activities falling under this functional classification include the discharge of workers, an exit interview, and care and compilation of all records incident to the work of employment.

Development

The function of development includes all of those activities directed toward the improvement of the working force. It involves the development and supervision of training courses for execu-

tives, foremen, and workers, the supervision of company employee publications, and the development of employee interest through the use of suggestion systems, bulletin boards, posters, contests, and the like.

Maintenance

The function of maintenance includes all of those activities that are directed toward keeping a well-selected group of employees at work under conditions conducive to health, happiness, and efficiency. This involves the development of adequate financial incentives, such as wage payment plans, bonuses, and pension plans. It includes the formulation and establishment of health and safety programs, employee representation plans, machinery for handling individual and group grievances, and the provision for any other employee service features—insurance, company stores, and stock purchase plans—that are conducive to increased employee efficiency and loyalty.

Research

Performance of the research function provides facts upon which to base decisions in regard to personnel policy and methods. Included under this function are the establishment of production standards and wage rates, the conduct of a periodic labor audit, and the maintenance of contacts with organizations that may furnish information concerning the development of current personnel methods and labor law.

PERSONNEL PRACTICE

The remainder of the personnel discussion is devoted to a description and evaluation of personnel practices as they are found in the business world. Many, if not most, of our examples are taken from the industrial world—from factories, mines, and railroads. It should be remembered, however, that these are examples and that the principles involved apply with equal force to the personnel problems of banks, insurance companies, retail stores, and general offices.

EMPLOYMENT

Some of the most important duties to be performed by a personnel department are those concerned with employment. These duties are important because upon the success of employment depend not only the success of all other personnel functions but also the scope of the personnel activities. Employment is the foundation function. The personnel problems presented by one group of workers of a certain quality and temperament are far different from what they might be if the workers were of a different quality and temperament. The employment activities furnish the material that in turn determines the scope and success of personnel work.

Sources of Labor Supply

In the absence of a thoroughly organized labor market the employment function involves, first of all, the creation and development of suitable sources of labor supply—that is, the discovery of places to which the personnel manager may turn to get additional employees of various skills and talents on relatively short notice and at a low cost. There are times, of course, when labor of all kinds and qualities is available to a business enterprise with little planning or expense. In periods of business depression, for example, almost every employer of labor has a large supply of workers waiting at his gates or in his employment office every morning, eager for a chance to work. In times of greater business activity, when the larger part of the working population is employed, on the other hand, the employer must take the initiative and develop sources of labor to which he can turn for an adequate and well-trained group of workers.

Applications by the Employee.—There are a number of sources to which an employer may turn. One of the most fruitful is to be found in the casual applicant that drifts into the employment office every day. Even in the best of times most employers find a large number of men standing at their doors in search of work every morning. These workers constitute what may be called a labor reserve and generally come without a request. The number, of course, will depend not only upon the conditions of the labor market but also upon the reputation of the business. Those

establishments that have a good reputation for wages, working conditions, and fair treatment of workers have the larger number from which to select employees. Moreover, while the employment manager may find that this source is fruitful as far as numbers is concerned it may have two serious disadvantages. First, these casual applicants may be made up largely of floaters with little skill—persons who, even if hired, may not intend to make their employment more than a temporary arrangement. Second, since the group is heterogeneous, the cost of selection may be increased by the necessity of interviewing twenty-five or thirty workers before one with the necessary training and skill is discovered.

Many voluntary applications for employment come to the employer through the mail. This is especially true in the case of retail store, bank, and office positions. It is a cheap source of supply and it enables the employer to weed out the less desirable applicants and to interview only those applicants whose education and training seem to fit them for the requirements of the position.

Employee Recommendations.—Another fruitful source is to be found in the friends of present employees. Some employers, when a vacancy occurs, instruct their employees as to the requirements of the job and ask them to call it to the attention of friends who may be able to qualify. In order to encourage care in recommendation a number of firms pay a bonus, depending upon the length of time the new employee remains with the company, to workers bringing their friends into the business. The chief merit of this source lies in the fact that a selected group of applicants is brought into the employment office at no cost to the company. Each applicant's references must be checked carefully if the management is to avoid a situation in which employees recommend their friends indiscriminately, either from friendly motives or to secure the bonus. Retail stores and offices use this source extensively.

Advertising for Applicants.—Most business firms use advertising at some time or other to secure some of their employees. They may advertise in newspapers, periodicals, trade journals, or in any publication that is widely read by workers. While certain types of workers respond to advertising, it has many weaknesses

as a source of labor supply. Probably its greatest weakness is that it is indiscriminate and consequently puts the company to some expense in weeding out applicants who cannot qualify for the position. This weakness can be partly overcome by a detailed statement of the job requirements, wages, and hours. Exactness of this sort allows many workers to eliminate themselves. Successful advertising depends upon a number of factors: wording of the advertisement, time of week published, the initial word, and whether the advertisement is "blind" or "open." It is generally felt that the blind advertisement (one in which the name of the advertiser is not given) defeats its own purpose since it does not attract the most desirable worker—the one already employed. He wants to know to whom he is making application for work in order that he may judge the truthfulness of the advertisement and the possibility of improving his condition. Moreover, many employees are afraid to answer a blind advertisement since they have no way of knowing that they are not answering one run by their own employer.

Contact Agencies between Employer and Employee.—Trade-unions may furnish a good supply of labor, but as a general source they are probably of lesser importance because the number of trades in which the workers are organized is relatively small.

One of the more costly sources of labor supply is the private employment exchange which for a fee brings together the employer who needs workers and the man who wants a job. This source is costly to the employer and to the employee. The latter may be sent to nonexistent jobs, he may not be informed of the actual working conditions, and he may be charged extortionate fees for placement. Because the resulting increased labor turnover is costly, the employer, in turn, is penalized for the lack of discrimination and interest shown by the private agency when it recommends a worker.

Public employment exchanges are a somewhat more satisfactory source of labor. Supported by taxation, they are operated for the mutual benefit of the employer and the employee. Even these exchanges, however, may be unsatisfactory. In some instances their usefulness is lessened by the fact that political appointees who have little interest and training in employment

problems are placed in charge. In almost all instances those workers registered at the public exchange are unskilled or semi-skilled. Better workers who have skills to offer hesitate to register in public exchanges. It is to be hoped, however, that with the development of the United States Employment Service, established by the Wagner-Peyser Act of 1933, and the perfection of the various State systems, public employment exchanges will furnish an ever-increasing amount of labor for private employers.

Educational institutions are also used to advantage as a source of labor supply. Young people leaving school, whether high school, grade school, or college, generally make up in enthusiasm what they lack in experience and training. Realizing this and seeing the possibility of securing future executive material, a great many companies send representatives each year to schools for the purpose of interviewing students ready to enter the business world.

Perhaps the most important source of all is that found inside the plant. Many persons in temporary jobs, all "failures," those poorly placed, or those in positions that do not offer opportunity commensurate with the ability of the workers furnish a splendid source. By transferring or promoting these workers the employer has not only increased the morale of his working force but has saved himself the expense of getting new and untrained workers into the business.

Selection and Placement

It is through the process of actual selection of workers that a personnel department has one of the best opportunities to prove its worth. This is true not only of the selection methods used with successful applicants but also of the method of rejecting those applicants who do not qualify for the job. The methods used should be directed not only toward obtaining all relevant information from the worker who is hired but should be directed no less toward rejection of applicants in such a way as to avoid the creation of ill will toward the firm. It should be obvious that selection procedure cannot be standardized. The interview is a personal contact and each applicant must be approached according to his personality make-up.

The Interview.—There are, however, a few general conditions that must prevail in every interview. In order to create as much enthusiasm as possible the interviewing environment should be cheerful. The impression that the applicant gains in the employment office will determine to a large extent his impression of the plant or store as a whole. Applicants should not be kept waiting too long for the interview. The applicant who is forced to wait an hour or two in a strange setting and at a time when he is under a nervous strain may lose any enthusiasm he might have had for the company. In the event of unavoidable delays many companies distribute company handbooks that the applicants may peruse for information about the company rules, regulations, policies, history, and so on. In the case of skilled workers many firms follow the practice of having the applicants fill out an application blank while they wait for the interview. The interview should be private if possible. Workers are sensitive to personal questioning before other people. Finally, it should be remembered that the interview is not an inquisition. It is not a conference arranged for the convenience of the employment manager alone. The employee's interest and rights are as great as those of the employer. The "take it or leave it" day is gone. Most employers realize that the applicant, as well as themselves, is interested in making a choice and as a result give the applicant complete information as to wages, hours, opportunity for advancement, working conditions, relation of the plant to the home, and any other information that will enable the applicant to make an intelligent choice. Nor is this done for humanitarian reasons alone. It pays. The worker who is not well informed as to all factors affecting his job and who discovers unsatisfactory features will increase the employer's labor turnover cost.

Application Blanks.—One of the most frequently used devices for determining the general eligibility of an applicant is the application blank. A great many application blanks are lengthy instruments that contain every question the employment manager can devise. This is not good practice. These blanks should be as simple as possible and should contain only those questions whose answers are known to have a bearing upon success in the job. This can be determined by an examination of the application blanks of

present employees and the correlation of the questions and answers with demonstrated success or failure in the company. This procedure may be illustrated by the case of the Sinclair Roofing Company.¹ This organization, having a high labor turnover, examined its application blank in the hope of finding a remedy. This was done as a result of the conviction that most of the questions asked had little or no bearing upon probable success of an employee in the company. The personnel manager, first of all, divided all workers, former and present, into two groups: those who had been successful in the company and those who had failed or who had poor company records. The application blanks of the two groups were examined to discover the correlation between the answers to the questions and the success in the company. It was discovered that some of the questions were always answered in a certain way by the successful workers and in another way by the poor or failing workers. Obviously, with this discovery of positive correlation the question was retained as a part of the application blank. It was discovered also that some questions were answered in the same way by both the successful and the poor workers—that is, it seemed to make no difference what answer was given. These questions, of course, had no relation to probable success in the company and were consequently discarded. It goes without saying that not all subsequent selections were perfect, but the scientific approach resulted in reduced labor turnover and lower labor costs. Constructed in this way the application blank is a valuable device for assisting in the determination of an applicant's qualifications, but it should never be looked upon as the sole basis of all hiring.

Frequently it is asked, "What questions should be asked on the application blank? What questions should be avoided? What are examples of good and bad questions?" From what has already been said the answer should be obvious. It is impossible to determine what questions should be asked until an attempt has been made to correlate the answers to given questions with demonstrated success in a given position. Good questions for one position may be poor questions for another.

¹ Reported in *Problems in Personnel Management*, Michigan Business Cases, No. 5.

Other Selection Devices.—Other devices that are designed to enable the employment manager to make a more intelligent selection of employees are general intelligence tests, aptitude tests, trade tests, and rating scales. It may be said at the outset that the value of these tests is uncertain. Many conflicting positions have been stated, and while it may be definitely said that they cannot be relied upon alone, they, like the application blank, are valuable tools to assist in the selection of workers.

By requiring the applicant to answer involved questions in a limited time, to follow confusing instructions, to complete analogies, and to perform other similar operations, the general intelligence test gives some measure of the applicant's mental alertness, judgment, and ability to adapt himself quickly to novel situations. While properly designed general intelligence tests have proved valuable in determining the ability of an applicant to advance in an organization they do have a number of shortcomings. They give no evidence as to a person's ability to do a specific job and they fail to indicate anything as to the motivation, character, and attitude of the applicant.

Special Ability Tests.—Somewhat more successful in selection are the various special ability tests. Such tests may be used to determine the ability for sustained attention. Quickness of perception, for example, may be tested as a positive guide in hiring persons for assembly work on small parts. Manual dexterity and muscular co-ordination may be judged by having the applicant pick up common pins from a loose pile and replace them (three pins in each hole) as rapidly as possible in holes that have been drilled into a flat board. Applicants for speedy routine jobs may be tested objectively for reaction time.

Trade Tests.—Trade tests are perhaps the most valuable of the selection aids, and are used more widely than other types of tests. The trade test is a means of measuring the ability of an applicant to perform a standard task of a certain trade under standard conditions. Such tests have been classified under several headings: oral, picture, performance, written, and combinations of these. The oral tests, because of their simplicity, are probably the most widely used and are composed of a series of standard questions to be answered by the applicant.

Picture trade tests involve the identification of tools, machinery, machine parts, and the like by the applicant. Performance tests involve the actual performance of a task by the applicant either with standard equipment or with a model. Thus the applicant for a stenographic position may be asked to take and transcribe dictation, a plumber may be given parts with which to construct a water coil, and the watchmaker may be given the parts of a clock to assemble. The written test is perhaps least satisfactory of all trade tests. The worker is given a set of standard questions which are to be answered in writing in much the same way as that in which the typical school examination is answered. The greatest defect of the written test is to be found in the fact that the most skilled worker may be unable to express himself well in writing.

Rating Scales.—Another aid to selection sometimes used and classified with tests is the rating scale. Since these scales contain subjective opinions they probably should not be classified as tests. On the rating scale the various qualifications required for the position are listed, and each applicant is rated according to the degree of excellence as judged by the interviewer. Its chief value lies in the fact that the interviewer is forced to make a conscious valuation of qualities about which he might otherwise think loosely if at all. While there are many varieties of rating scales, used for both hiring and promotion purposes, the one used by one of the large mercantile establishments, and shown in Figure 26, will serve as an example.

RATING BLANK
(For interviewing applicants)

Name of Applicant..... Date.....
Where Interviewed..... By Whom.....

Instructions: In rating an applicant it is necessary to have clearly in mind the definition of the qualities upon which he is to be rated. Use the rating words as a guide and place a check at some point on the line which represents your estimate of the applicant's standing with regard to this quality. It is not necessary to place the check directly above words.

APPEARANCE

Consider how he impresses you by his physique and dress. Does he appear clean, neat, and attractive?

..... Impressive Creditable Unimpressive Unfavorable Crude

PHYSICAL CONDITION

Consider his physical fitness for continued and strenuous effort. Is his health and strength such that he may be expected to perform his duties satisfactorily?

Great Stamina	Healthy—Energetic	Normal Physical Condition	Below Par—Little Reserve Energy	Sickly—No Endurance
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ADAPTABILITY

Consider his ability to get along with his associates. Will he be helpful, kindly, and co-operative, or selfish and disagreeable?

Invariably Congenial and Co-operative	Tactful and Obliging	Passive Co-operation	Difficult to handle	Obstructionist
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INITIATIVE

Consider his self-assertion and initiative. Will he do of his own accord those things which need to be done or will he be helpless without constant supervision?

Unusual Degree of Initiative	Shows Ability to Think for Himself	Fair Degree of Originality	Constant Supervision	Lack of Initiative
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INDUSTRY

Consider his ability to work hard. Will he constantly give his best effort to his duties or will he do as little as he can get by?

Consistent Hard Worker	Industrious	Satisfactory	Do Only What Is Required	Will Loaf on Job
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PERSEVERANCE

Consider his determination in the face of difficulties. Will he persevere or be easily discouraged?

Unusual Degree of Determination	Persistent Type	Fair Determination	Easily Discouraged
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ABILITY TO DEVELOP

Consider his ability to develop into a capable store manager during the normal training period.

Rapid Development	Above the Average	Satisfactory Progress	Slow Progress	Never Reach Goal
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DESIRABILITY

Considering all factors, do you feel this applicant is a desirable type?

Preferred	Exceptional	Very Desirable	Good	Questionable	Undesirable Prospect
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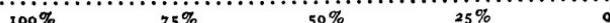


FIG. 26.—Rating scale used in interviews.

The Physical Examination

A great many business enterprises give a physical examination to an applicant either before final hiring or after he has been provisionally at work for a day or two. Contrary to the belief of many workers the physical examination is not given with the intention of rejecting all applicants who display less than 100 per cent physical perfection. Instead it is given to aid in intelligent placement and follow-up of the workers. In the absence of such an examination workers may be assigned to jobs beyond their strength or for which they may be unsuited for other physical reasons. Workers carrying infectious diseases may be hired. Moreover, the employer may want to protect himself against litigation that may arise from a physical defect that the employee believes to have developed as a result of his employment. The thoroughness of the examination will, of course, depend upon the company's interest in health.

Induction of the New Worker

"First impressions are lasting." This statement is perhaps as important in personnel management as in any other field of endeavor. The period immediately following selection of the worker is in many ways the most crucial period since upon it will depend in a large measure the future success of the worker. If the worker is started to work in a strange environment without any adequate explanation of the aims, policies, regulations, and conventions in the plant, it is hardly surprising if he fails to become enthusiastic about his work. Even if it be assumed that he is enthusiastic, the worker's productivity will necessarily be less when he is poorly introduced than it would otherwise be. That a person accustomed to his environment and free from the nervous tension of "newness" is more productive than one in strange surroundings is generally admitted. The purpose, therefore, of a proper introduction to the job is to reduce the amount of time necessary for the worker to become acclimated to his new environment.

A part of the introduction is completed by the interview when the employment interviewer explains wages, hours, overtime, and other conditions of work, but considerably more than

this is required. Many companies have printed employees' handbooks that they distribute to new workers. In these are explained not only the company history and policies, but also company rules and regulations, safety and health programs, medical assistance, legal aid, and the educational and social advantages offered by the company. In many instances, also, the new worker is taken on a trip through the plant to get a picture of his general environment, locker space, washroom facilities, and so on. A great many department stores use the sponsor system under which an experienced and reliable saleswoman is asked to take charge of the new saleswoman until she is "broken in." The sponsor's duties include instructing in making out sales slips, explaining stock and use of equipment, giving information about lockers, washroom and toilet facilities, and taking the new girl out to lunch for a few days. Some extra remuneration is usually given the sponsor for her work.

Follow-up Work

Not only should the worker be properly introduced but he should be carefully followed up for a short period after his employment to make sure that any necessary adjustments are made. This may be done by the immediate supervisor or by a representative of the personnel department, who should aim to discover not only the reaction of the worker to his new job but also to check on the judgment of the employment office in order that transfers may be made if necessary. In some companies that have elaborate safety and health programs the safety engineer makes a follow-up call on the new worker to explain the program and to solicit suggestions from him. Moreover, in those companies having insurance or benefit systems a representative of the personnel department is sometimes sent to the new worker, when he becomes eligible, to give a detailed explanation of the operation, premiums, and benefits of the system.

Labor Turnover

Labor turnover may be calculated to give some evidence of the effectiveness of selection and placement methods. Labor turnover may be defined as the flow of workers into and out of a business enterprise during a given period, a week or month or

year. While there is no general agreement as to the correct method of measuring turnover, one formula which seems adequate to a great many students of the subject involves dividing the number of replacements by the average number of workers at work during a given period. A more compact expression of the method is:

$T = \frac{R}{M}$, where R represents replacements and M represents the average number of laborers at work during the period. Another commonly used formula is: $T = \frac{S}{M}$, where S represents separations from the pay roll and M represents the average number of men actually at work during a given period.

Those favoring the first formula hold that turnover does not begin until replacement occurs and that the use of separation rather than replacements as the numerator gives erroneous results. During times when the labor force is increasing, they say, the use of separations is satisfactory, but it ceases to be so when the force is decreasing. For example, if a plant employs five hundred men at the beginning of the month and because of a fall in demand for its product it lays off one hundred men without replacement, there has been no labor turnover. They defend the use of "the average number of men actually at work" as the denominator by pointing to investigations that have indicated that many plants have from 6 to 15 per cent fewer men at work daily than appear on the pay roll.

Those favoring the use of separations rather than replacements as a numerator indicate that reductions in labor force are usually temporary and that worker replacements, even after a long time, represent a cost no less than if immediate replacement had been made.

Classification of Turnover.—Neither of the foregoing two formulas is adequate. Turnover rates are determined, not to satisfy the urge to research, but to discover remedies for a costly personnel problem. Turnover figures should be stated in terms of causes, that is, in such a way as to indicate whether the turnover resulted from voluntary quits, discharges, or layoffs. A more satisfactory method, therefore, would be to calculate three different rates in the following way: $\frac{Q}{M}$, $\frac{D}{M}$, and $\frac{L}{M}$, where Q represents

quits, D represents discharges, L represents layoffs, and M represents the average number of men at work during a given period. If data are collected and computed weekly, the numerator should be multiplied by 52 to change the figure to a yearly basis.

Nor is it enough to classify labor turnover by causes. Turnover figures should be obtained by departments also. Frequently such an analysis will furnish evidence that the department head does not know how to handle his employees, or that he is having some special difficulty that can be remedied if properly called to his attention.

It is impossible to set up standards as to what turnover percentages can be considered normal. The nature of the business, the time of the year, the class of laborers, the stage of the business cycle, and the quality of management will account for great differences. Moreover, it is impossible to give accurate information as to turnover in particular businesses, since there is as yet no standardization in methods and time of computation. Two manufacturing establishments or two department stores may announce the same turnover percentages, but for comparative purposes they are of little value if the methods of computation are not identical.

The greater part of labor turnover occurs among those workers with shorter service records. This statement is supported by the results of a study which indicates that the turnover among workers whose term of employment had been less than one month was 1,062 per cent, while for those with service records of two years or more the turnover was only 11 per cent.²

Other studies have indicated that almost half of the turnover occurs during the first month of service and almost three-fourths during the first six months. Turnover is higher among the unskilled than among the skilled workers, slightly higher among men than among women, and higher among younger workers than among older ones.

Costs of Turnover.—The importance of labor turnover is to be seen in the cost involved. Every new employee introduced into an establishment entails a cost, not only to the employer but to

² W. D. Scott, R. C. Clothier and S. B. Mathewson, *Personnel Management* (McGraw-Hill Book Company, 1931), p. 468.

the employee and to society as well. For the employer, there are the clerical costs involved in selection and placement, the cost of training new workers, and additional costs represented in increased breakage and spoilage of materials and equipment, increased accident frequency, and lower worker productivity during the first few weeks of employment. The cost of replacement to the employer has been estimated as follows:

For advertising	\$ 0.50
For hiring and clerical work .....	.75
For instruction	5.50
For wear and tear on machines and tools	12.00
For loss in production	25.50
For spoiled work and mistakes	12.00
For accidents	3.00
For interest on extra equipment .....	.50
Total	<u>\$59.75</u> ⁸

Society and the worker are penalized through the depletion of financial reserves during the time the worker is unemployed, through loss of skill and morale resulting from "floating," and through loss in productivity and earning power during the time the worker is becoming adjusted to his new work.

Personnel Records

With the development of personnel departments in business it was discovered that many problems arose that could be approached intelligently only after a careful study of facts. Which of the twenty-three workers in Department A is most deserving of promotion? Which one, by his past performance, has demonstrated his ability to fill this vacancy? Have the present personnel policies resulted in a reduction of labor turnover? What specific qualities are essential to the successful performance of a file clerk's duties? Such are the questions that arise every day in the operation of a personnel department, and the answers in most cases can be arrived at only after an examination of personnel records.⁴

⁸ Reported in H. W. Schefferman, *Employment Methods* (The Ronald Press Company, 1920), p. 196.

⁴ See Allen Everett, *Personnel Records and Reports*, Office Management Series, No. 47 (American Management Association, 1930), *passim*.

The character of personnel records varies from business to business and from position to position, but in most businesses that maintain a personnel department the following records concerning each employee can usually be found: application blank, impressions of interviewer, letters of recommendation, positions held with the company, wage and salary changes, training courses completed while with the company, attendance record, results of periodical rating, and employment test results.

Many records concerning the personnel in the aggregate are frequently found: labor turnover, attendance and tardiness, wage and salary payments, industrial accidents, illness, job specifications, and so on. With the passage of both Federal and State social security laws additional records for unemployment insurance and old-age pensions are necessary.

EMPLOYEE DEVELOPMENT: EDUCATION AND TRAINING

Another important function of the personnel department is that of education and training of employees; not only training of the new employee to do his job, but also training of the old employee to fit him for a better job or to perform his present job more efficiently. The necessity of training exists in every business, both large and small, and will continue to exist until society is able to train all workers before they enter their business life, until all business units are alike in process and equipment, and until economic life ceases to change. Obviously, these conditions will never prevail. Society cannot force children into school, nor can it give the variety of training required by modern industry. Plants do differ in process and in equipment and will differ as long as human wants and opinions differ.

The immediate purpose of industrial training is increased production (of either goods or services) and profits by decreased errors, waste of motion, material, and time. There is, however, a larger purpose that should not be left unmentioned—a purpose with broad social implications. This purpose recognizes the possibility for improving the general standard of living through increasing the skill and knowledge of the working population. In

addition to increased social earning power there are also inestimable gains in individual and social satisfaction.

Training Methods

In the past much of the training by business enterprises has been what C. R. Allen⁵ has called *training by absorption*. Under this method a worker attains his skill, if at all, without any organized assistance, largely by using his eyes and ears. Either he observes the methods used by a fellow worker on the machine next to him or he "gets next" to his fellow worker and gets informal instruction during the noon hour. Regardless of the method used, the training burden is placed entirely upon the shoulders of the worker and has many obvious shortcomings. The period of training, during which productivity is always low, is unnecessarily long. The new worker may absorb from his fellow worker as many undesirable working habits as desirable ones and may not, therefore, ever become a first-class worker. Finally, the worker who is called upon for assistance may be forced to neglect his own work.

Realization of these shortcomings has led to the development of training by intention, which differs from absorption training in that there is some recognized plan for training both old and new men, some plan that provides for the delegation of the training responsibility to one man who give either all or part of his working time to this task. It may take the form of specific job training, trade training, or industrial training. It may be directed toward workers, foremen, or executives.

Training on the Floor.—The most common method of instructing new employees in all types of business in a specific job is known as "training on the floor." Under this system the new employee is assigned to his job at once. The training is usually, though not always, done by the foreman or department head, who gives a part of his time each day to the instruction of new workers. This type of training has rather narrow limitations. In many cases the person responsible for the training may be an expert craftsman or salesperson and a good director of work, but

⁵ *The Instructor, The Man, and The Job* (J. B. Lippincott Company, 1919), pp. 11 et seq.

he may be a poor teacher. He may be unable to instruct others in work he does well himself. In almost all cases the nature of the foreman's work and the scarcity of time prevent him from giving sufficient time and energy to training except at the expense of his other duties.

A desirable modification of the method just described is a plan in which the training, while done on the floor, is done by an instructor from the personnel department. By placing the responsibility for training on one person who is presumably skilled in teaching, the management can be relatively sure that the training will be done, and done well. Moreover, since no additional equipment is necessary, effective teaching can be done in this way at a minimum cost. There are, however, some disadvantages. In the first place the mistakes and slowness of a new and inexperienced factory worker who is producing with others on the floor may result in serious interference with the regular production. This is especially true in continuous factory production where a breakdown in one stage of the process necessitates stoppage in others. The errors and misinformation of the inexperienced saleswoman or clerk may result in losses to the retail store and in inconvenience to the customer.

The Vestibule School.—One of the most effective methods of training for a single job or operation, or for those jobs that require more repetitive skill than broad knowledge and judgment, is the vestibule school. Training of this type provides a separate place of learning for the new worker before he is allowed to take part in regular production. Usually an instructor who gives his full time to teaching is in charge and the school is equipped with materials, tools, and equipment identical with those regularly used. In all cases an attempt is made to approximate as nearly as possible the factory, office, or retail environment. The advantages of this type of training are many. To use the factory as an example: the regular production processes are not interfered with. Since the new worker is under constant supervision there is little waste of material, little breakage of tools and equipment, and more rapid adjustment of the worker to his new environment. The new worker, free from the eyes of older and more expert workers, is also free from the nervous strain that gen-

erally accompanies the knowledge of one's rookie status. The foreman is relieved from instructional work and is furnished with workers needing almost no instructional supervision. The system is not, however, without disadvantages, the most serious probably being that the extra equipment and room required are costly—in many instances prohibitive for the small business. It is suggested by some, too, that the schoolroom attitude absent in training on the floor and lengthening the training period, prevails in the vestibule school. This contention is open to serious doubt.

The length of time required in a vestibule school varies with the nature of the job being taught, ranging in different cases from one day to three or four months. In all cases it has been discovered that more rapid progress is made where the job to be taught is broken down into small parts and where these small parts are taught according to learning difficulty, i.e., the easiest part taught first and the hardest last. Usually, since the need for learning is apparent, this will follow the usual job sequence.

Apprenticeship.—An older training plan, usually used for industrial employment and directed toward training for a trade rather than for a specific task, is the apprenticeship plan. Here a young man enters into an agreement to work for a period ranging from one to five years at a number of jobs in a trade. He is usually taught by the foreman and paid a low wage for both his hours of production and of instruction. At the end of his apprenticeship period he is usually graduated as a qualified journeyman and is given a few dollars and a kit of tools. This plan is rapidly passing from industry since most young men prefer to get a relatively large wage by operating a semiautomatic machine. The plan is costly from the standpoint of time. An unscrupulous master may keep the apprentice too long at small and meaningless errands without giving him any real trade information.

Training of Department Heads and Supervisors.—The foreman in the factory, the department head in the retail store, the chief clerk in the office, and any other person who fills a supervisory position in business occupies an extremely important place. Upon him falls the task of directing the hour-to-hour work of employees and of interpreting company regulations and policy. In the eyes of the worker the department head is the management,

and it is the department head's attitude that determines, in a large measure, the loyalty and efficiency of the working force. The training of department heads and supervisors, therefore, becomes of prime importance.

The primary function of the training of foremen is the development of leadership. The foreman's area of vision and information must be broadened so that he will be able to win the confidence and respect of those working under his supervision. Accordingly, the scope of foreman training is considerably wider than that of job training, and it includes more than instruction in the mechanics of supervision and report making.

The following foreman training course, used by one of the large tire manufacturing companies, illustrates the breadth of instruction:

First year:

1. Department management—operation, reports, and charts.
2. Materials—crude rubber and cotton.
3. Library—book reviews, reading courses, and current events.
4. Guidance—consultation and development records.
5. Mathematics—arithmetic, algebra, and trigonometry.
6. Recreation—gym, games, and powwow.

Second year:

1. Manufacture—history, process, and products.
2. Recreation—gym, games, and powwow.
3. Costs—fundamentals.
4. Library—book reviews, reading courses, and current events.
5. Organization—analysis and supervision, functions and human factors.
6. Guidance—consultation and development records.

The method of training foremen is of great importance. Of necessity the lecture system is frequently used, but it has serious limitations. The lecturer may fail to adapt his language to the level of the foremen; he may go too rapidly, not giving the men a chance to ask questions or to voice disagreement. But because it is a relatively inexpensive type of training, the lecture method is commonly used.

A somewhat better method is the group leader system, in which one person, perhaps a foreman, acts as discussion leader.

Such questions as the following are discussed: "What should be done with a good worker who drinks?" "How would you handle a request for a pay increase?" "Is it desirable for disciplinary reasons to transfer a worker to a job he does not like?" The advantages of the system are to be found in the fact that the material covered is adapted to the needs and language of the employees. Workers remember conclusions better because of keener interest, and the conclusions, since self-made, are taken more seriously. It is a more costly method than the lecture system, and, unless it is in the hands of a capable director, progress may be slow.

What has been said of foreman training applies with equal force to the training of retail store department heads, office managers, and division or district sales managers. They are in constant contact with the employees. It is, for the most part, through them that company policy is interpreted and from them that employees receive much of their inspiration. The effectiveness of the training given to this class of supervisors is therefore of great concern to most businesses.

Most department stores use the group conference method for training department heads and buyers. In these conferences their own problems of selling, purchasing, merchandising, displaying, and supervising are discussed. In a few of the large retail stores department heads are given general courses in economics, marketing, advertising and selling, and retail store management. In some instances the participation of department heads in the training of their own sales force constitutes an important part of the program for training department heads.

Training for Executives.—Another duty falling upon the shoulders of the training department is the development of future executive material. While some of the executive material is drawn from the ranks of department heads and other supervisors, the tendency is to draw the greater part from promising college graduates. The scope of the executive training course is even broader than that of foreman training, for it covers, in addition to shop or retail management and practice, such courses as business law, English, public speaking, economics, money and banking, applied psychology, salesmanship, and credit and collections.

Typically, too, executive training courses are of longer duration than foreman training courses, many covering three years and four years.

S U M M A R Y

Even though there may be no separate personnel department, every business, large or small, must perform certain personnel functions. These functions may be classified under five heads: policy, employment, development, maintenance, and research.

The employment function involves (1) the development of adequate and satisfactory sources of labor supply; (2) the determination of the fitness of an applicant for a position, involving the use of application blanks, interviews, tests, rating scales, and physical examinations; (3) the introduction of the new employee to his work and periodic follow-up; (4) the determination of the extent and causes of labor turnover; and (5) the maintenance of adequate personnel records.

The function of development includes all of those activities directed toward the improvement of personnel quality. In practice this function is reflected in business training programs. The method and content of business training vary widely. For some positions the most effective training is done "on the floor." The demands of other positions necessitate the use of the "vestibule school."

The training of most workers is confined to specific job instruction, which, in most instances, does not require a great deal of time. Department heads, supervisors, and executives, however, are usually instructed not only in the performance of their day-to-day duties but also in such broad fields of knowledge as economics, marketing, and advertising.

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PROBLEMS

1. What are the functions of the personnel department? List five or six specific personnel problems which each function is intended to solve.
2. You are engaged as the personnel manager in a department store employing twelve hundred salespeople. Draw up a statement of your personnel policy. How would your statement differ if you were the personnel manager in a steel mill?
3. The management of a large coal mine discovers that a sudden increase in the demand for his product necessitates adding 20 per cent more employees to his working force. What advice would you offer as to possible sources of supply?
4. Describe the process you would use to construct an application blank.
5. Some companies refuse to hire persons who make very high test scores on general intelligence tests. How can this practice be justified?
6. How would you justify the maintenance of a central plant employment department in view of the fact that the foreman in each department is more familiar with his own needs than is anyone else in the plant? Why not allow the foreman to do his own interviewing and hiring?
7. Prepare an outline of the arguments you would use to convince your employer of the wisdom of regularly using rating scales.
8. What is labor turnover? Explain its significance. What method of computation would you employ?
9. "The department foreman should train all workers in his own department. He knows the jobs and is therefore better qualified to determine the points to be taught than anyone else in the plant." Do you agree? Why or why not?
10. What are the advantages and disadvantages of training on the floor? Of the vestibule school? List a number of jobs for which you would train on the floor. For which you would use the vestibule school.
11. "A good worker needs little, if any, training. He will learn all he needs to know by keeping his eyes open." Would you agree with this statement? Why?
12. Suppose you are charged with the responsibility of outlining the training program for prospective executives. What subjects would be included in your outline? Why, exactly, would you include each?

13. "It would probably be wise if personnel managers would take the money they now spend on the prevention of accidents and illness and add it to the wages of the workers." Would you support this change of policy?

14. "None but the most socially minded employers would spend money on accident prevention if they were not compelled to by law." Do you agree? Why or why not?

15. "The farsighted personnel manager will do little promoting but will fill jobs from the outside, thereby getting a constant supply of fresh blood into the organization." List arguments for and against this statement.

CHAPTER XV

PERSONNEL PRACTICE: MAINTENANCE AND ORGANIZATION

FINANCIAL INCENTIVES

As previously indicated, workers are interested in much more than the financial reward received for their labor. They are interested in safety, security of employment, a wholesome environment, proper placement, and the like. However important these may be, it would be absurd to suggest that financial rewards are not of consequence. They are important not only to the worker, but also to the employer and to society. The financial reward received from his labor determines for the worker, in a large measure, his standard of living. Coupled with the cost of living, the income of the wage earner determines the extent to which he and his family will be properly fed, clothed, and sheltered. It limits the education of his children and defines his ability to furnish wholesome comforts and luxuries for his family. His income is also intimately related to his ability to "put something by" for his old age and for periods of unemployment.

The employer's interest in financial rewards is chiefly in the extent to which the rewards paid furnish an incentive for improved worker efficiency and increased productivity. To the worker, however, the intimate relation of his income to his general health and happiness makes it a powerful factor in the creation of good will and loyalty. Wages entirely satisfactory to workers as to amount and time of payment go far to encourage increased efficiency.

Society is interested in worker income from the standpoint of the social satisfactions afforded. Low incomes are usually conducive to an increased mortality rate, poor general health, and diminished efficiency. Adequate income affords not only increased physical well-being but also a general rise in the cultural level.

The worker's income, then, should be considered as something more than a matter of the mechanics of wage payment. It involves more than the discovery of a method of wage payment that is satisfactory to the employees. It affects standards of living, health, efficiency, productivity, and the cultural level of a community.

Systems of Wage Payment in Industry

Classified broadly, there are three systems of wage payment. First, there is the time-wage plan, under which a worker is paid in strict accordance with the time he spends on his employer's work, and with only vague reference to quantity of output; in other words, the worker gets so much a day, a week, or a month. This plan, the oldest in point of time, until relatively recent years was the most frequently used. Second, there is the piece-rate plan, by which the worker is paid according to his output, the wage being determined by multiplying the number of units produced by the rate per piece. The third system, more recently developed, is the special incentive system. Under this system, which is usually a modification of either the time-wage or piece-rate plan, a worker is given a fixed sum for standard production and a premium or bonus for all produced in excess of the production standard. The trend in methods of wage payment may be seen by the following figures announced by the National Industrial Conference Board:¹

TABLE III

COMPARATIVE DISTRIBUTION OF WORKERS BY SYSTEMS OF WAGE PAYMENT

WAGE PLANS	1923		1928	
	Number	Per Cent	Number	Per Cent
Time wages	416,518	55.7	367,454	47.3
Piece wages	280,259	37.5	287,586	37.0
Other incentive plans *	50,633	6.8	122,336	15.7

* Modifications of piece- or time-rate plans.

¹ *Systems of Wage Payment*, 1930, p. 9.

Time-Wage System.—The time-wage plan is still very generally used, even though it has many disadvantages. One of the frequent criticisms of the plan is that under it there is no account of the worker's output; that is, regardless of output the worker is paid the same amount. The time-wage contract is one-sided, it is said, for the employer agrees to give a specific amount of money, while the worker agrees definitely to give only his time. This criticism, while fundamentally true, overstates the case. There is a relationship between output and wages paid even under the time-wage system. To be sure, the expected output may not be stated at any time during the working agreement, but employers do formulate production standards in their minds, however vaguely, and they generally rid themselves of employees falling below these standards.

Another criticism generally leveled at the time-wage plan is that labor costs per unit produced are high when the employees are paid by time. Workers differ in ability and willingness, so that the product of the least efficient is the most costly. If the more able workers are not stimulated to exercise their efficiency, the output of the entire group is less, and therefore more costly than if each worker is paid in accordance with his productivity.

Those who feel that there is a common tendency for all workers to allow their productivity to fall to the level of the least efficient man, suggest that time-wage payment reduces the output of the better workers. This criticism, however, fails to recognize that most workers, realizing that the less efficient men are laid off first in times of business depression, protect their own jobs by displaying to the employer their relative efficiency.

These and other criticisms generally leveled at the time wage, while essentially true, are probably overstated. There are many motives that impel men to exert themselves, such as a pride in craftsmanship, a love of competition, and a feeling of satisfaction resulting from good work; but for the most part, the criticisms are sound. The time-wage system does not offer any real incentive for increased output.

Piece-Rate System.—As far as incentive value is concerned, the piece-rate plan is probably preferable to the time-wage plan. As has been suggested, under this plan the worker is paid strictly

according to the amount he produces, that is, so much per piece. If the output is large, the reward is large; if the output is small, the wage is likewise small. It can be easily seen that the natural tendency, if the worker is interested in increased earnings, is toward greater productive efficiency.

Work in which an identical job is repeated time after time is the type to which the piece-rate plan is most easily adaptable. Wherever the work is repetitive a standard price can be fixed for each job, whether the number of jobs is large or small. This system, however, cannot be used on all jobs. For example, it cannot be used in highly mechanized jobs where the speed of the machine regulates the output of the worker. If used in such a situation, payment is made, not in accordance with the industry of the worker, but instead in accordance with the regulated speed of the machine. The piece-rate system can be used, moreover, only on those jobs where it is possible to measure the output. Accordingly, such work as that of an architect cannot be paid by piece rates. A third limitation upon piece-rate payment is found in those jobs in which the product is not standardized, or where special jobs are being done on order—jobs in which the worker performs one task for a while, another later, and still another at some other time.

In those jobs where the piece-rate plan can be used a number of advantages may be seen. A study by the National Industrial Conference Board indicates the following advantages over the time-wage system:²

1. Output increased from 10 per cent to 400 per cent.
2. Employee earnings increased from 10 per cent to 100 per cent.
3. Unit cost decreased from 10 per cent to 50 per cent.
4. Very appreciable reduction in labor turnover.

If these are advantages of the piece-rate system, why, it may be asked, do not more firms use the plan? As has been suggested, there are some jobs for which it cannot be used. But even for those jobs to which it may be applied there are some reasons for not doing so. Referring again to the National Industrial Conference Board study,³ we find that the chief disadvantages, as reported by almost six hundred plants, seem to be (1) that it is

² *Systems of Wage Payment*, 1930, p. 9.

³ *Ibid.*, pp. 38 et seq.

sometimes difficult to establish the original rate; (2) workers may be aggrieved if and when the company cuts the rate per piece; (3) any change in the work process may necessitate a modification of the piece rates; (4) since the piece-rate system takes no account of factors beyond the control of the worker, such as breakdowns in machinery, lack of orders, and so on, workers may find their earnings reduced through no fault of their own; (5) the worker's desire to increase his earnings may have an adverse effect on the quality of the product; and (6) the piece-rate system is based upon quantity alone and fails to recognize such intangible qualities as loyalty, long service, and general usefulness in an organization.

These disadvantages, however, are not fatal. The refinement of methods of studying time and motion has reduced to a minimum the difficulty of establishing the original rates and has done much toward eliminating the necessity for rate cutting. It is possible to pay workers a time wage for unavoidable delays, and a system of rigorous inspection can prevent, in part at least, the sacrifice of quality for quantity.

Special Incentive Systems: The Taylor System.—A modification of the piece-rate plan is the Taylor Differential Piece-Rate Plan, devised by Frederick Winslow Taylor in 1884. Prerequisite to the establishment of a piece rate, a time and motion study is made to determine just how much an average workman can produce in a day's time without sacrificing quality or health. One piece rate is paid for standard production. Workers failing to reach standard production are paid a lower piece rate. For example, suppose twenty pieces a day has been set as the standard output. The piece rate for standard production is eighteen cents. For substandard production the piece rate is fixed at sixteen cents. Then:

WORKER	PIECES PRODUCED	PIECE RATE	DAILY EARNINGS
A	21	\$0.18	\$3.78
B	20	.18	3.60
C	18	.16	2.88

It is evident that the more efficient worker is generously rewarded under this plan, while the less efficient is penalized. It fur-

nishes a good incentive for the better workers, but is generally considered hard on the beginner. Its use in times of labor shortage is questionable.

The Halsey System.—Another of the earlier special incentive plans is that developed by F. K. Halsey. It is a modification of the time wage, and under it a worker is guaranteed a minimum time or day wage. In addition to this time wage, the worker is paid a bonus for all units produced in excess of the production standard. For example, let it be assumed that the standard output is set at twenty pieces a day, and that the normal time-wage rate is \$6.00 a day. The earnings for the worker who produces more than standard will be made up of two parts; first, a regular wage calculated by multiplying the time taken for the standard output by the normal time rate, and second, a premium determined by multiplying the amount of time saved by one-half of the normal time rate, thus:

WORKER	TIME TAKEN TO PRODUCE 20 PIECES		TIME SAVED	REG. WAGE	BONUS	TOTAL FOR 20 PIECES	DAY'S EARNINGS
	A	B					
A	$\frac{2}{3}$ day	$\frac{1}{3}$ day	$\frac{1}{3}$ day	\$4.00 *	\$1.00 †	\$5.00	\$7.50 ‡
B	1 day	..	..	6.00	..	6.00	6.00

* $\frac{2}{3} \times \$6.00 = \4.00 .

† $\$3.00 (\frac{1}{2} \text{ of } \$6.00) \times \frac{1}{3} = \1.00 .

‡ $\frac{2}{3} \times \$5.00 = \7.50 .

This plan has advantages in that it is based on the going time wage and is therefore easy to introduce. It also has the one quality essential to any wage incentive plan—simplicity. It is sufficiently simple that any worker can determine his own earnings at the end of a day's work. Since workers do differ in capacity, it does penalize the slower employee. Of the many special incentive plans the two described will serve to demonstrate how they operate. To be effective, an incentive plan must be simple enough for the workers to understand, and the standard output must not be so high that a bonus can be gained only at the expense of the worker's health.

There have been many other special incentive wage plans devised at one time or another—the Gantt Task and Bonus Plan, the Emerson Efficiency Plan, the Rowan Plan, and the Bedaux

Point System—which, although differing in detail, are similar in the incentive principle to those plans already discussed.

Wage and Salary Administration in White-Collar Positions

The employees of banks, insurance companies, retail stores, and other similar businesses are usually paid a straight salary based upon a time unit. A National Industrial Conference Board study reports the use of the piece-rate method of payment in only 7.7 per cent of the insurance companies covered, and in 11.8 per cent of the retail and wholesale firms.⁴ No banks were reported to be using the piece-rate method. The reason for this showing is fairly obvious. In most positions found in businesses of this type the work does not result in measurable units of product.

Very much the same situation exists in banks and insurance companies with respect to the payment of premiums. The same survey reports no premium or bonus systems in use in banks. Only 5.1 per cent of the insurance companies reported the payment of a bonus. In retail and wholesale establishments premium and bonus systems are numerous, being reported in 34.2 per cent of the companies studied.

Many department stores combine the straight salary with the payment of a premium or commission on each dollar of sales. It is common to find salespersons working for twelve or fifteen dollars a week plus 1 or 2 per cent of their total sales.

Although there are a few companies that pay salaries plus commissions to their salesmen on the road, a more frequent practice, in prosperous times at least, is to pay commissions only. In periods of business depression many companies are forced to pay both a salary and commission in order to hold their most able salesmen.

Profit Sharing

A second form of financial incentive is known as profit sharing, by which the employer shares a portion of his profits with employees having superior production records. Profit sharing, though not generally used, dates back almost a hundred years, the first known plan being used in France as early as 1842.

⁴ *What Employers Are Doing for Employees*, National Industrial Conference Board, 1936, p. 36.

Three general types of profit-sharing plans are in use: cash payments based upon net earnings may be made at the end of a specified period; the divided profits may be placed in a savings account, a pension fund, or an annuity fund to be drawn by the employee at some future date; or profits may be distributed in the form of stock.

The cash payment plan is most frequently used and is, in most cases, most satisfactory to the employees, since they prefer to have additional income paid at frequent intervals. Many employers object to cash payments since, they say, they have no assurance that the additional income is being wisely spent. Since profits are shared to increase worker efficiency it is difficult to see the difference between this form of payment and wages paid for work done. In neither case is the employer under any obligation to supervise the expenditure of the worker's income.

A question that frequently arises in connection with the cash payment is in regard to the frequency with which profit shares are distributed. Remote rewards furnish little incentive for the average person, and it is probably true that payments every three or six months are more desirable than those made annually.

Profit sharing by developing and adding to a savings account or a pension fund has been less successful than that by cash payment. Under this system of distribution the employee is generally given his share of the profits only after he has reached a certain age or after he has spent a specified number of years in the service of the company. In most cases he is paid his share in the event that he leaves the company voluntarily, but he may be denied any share if he is discharged. In all cases the payment is uncertain and remote, and consequently of little value as an incentive.

The third type of profit sharing—stock distribution—is commonly used in this country. It gives an employee an opportunity for regular savings and profitable investment, but again remoteness of payment diminishes the incentive value. In many instances the stock distributed is nontransferable except when the employee leaves the company.

One of the most important questions in connection with profit sharing has to do with the employees to whom profits shall be paid. Who shall be eligible to share in the profits? While many plans originally paid to the so-called productive workers the

greater part of the amount to be distributed, experience has indicated the wisdom of generous payment to supervisors, foremen, and other minor executives, the conviction being that these employees are as much responsible for increased productivity as are the workers themselves.

INDUSTRIAL HEALTH ACTIVITIES⁵

Obviously a worker in good health is more efficient than one in poor health, just as a machine in a good state of repair is more productive than one in a poor state. Awareness of this, coupled with a knowledge of the extent and cost of poor health in business and industry, has led to a great increase in the number of establishments that maintain health programs of one sort or another. According to one study,⁶ in 1926 slightly more than 25 per cent of the 375 reporting establishments had first-aid equipment only. In 1930, out of 430 companies reporting, the number having first-aid equipment only had been reduced to about 8 per cent. Moreover, in 1926 only 171 companies employed physicians.

The present status of industrial health activities is indicated by a recent survey of the National Industrial Conference Board.⁷ This survey found that 65.2 per cent of the businesses studied maintained a medical and health service of some sort. The most frequently reported form of medical and health work was organized first-aid programs, but 47.1 per cent of the total number studied maintained dispensaries or hospitals. Slightly more than one-third of the companies reported the employment of full-time plant nurses, but only a tenth of the companies studied reported the employment of full-time physicians. The summary of this study is presented in Table IV.

Medical service programs are more often found in nonmanufacturing business than in manufacturing. The Conference Board study reports that 81.2 per cent of the nonmanufacturing companies maintain medical programs. This is to be compared with

⁵ The expression "industrial health activities" is used to include the health and safety programs of all types of business, whether industrial or commercial. The term "industrial accidents" is likewise used in this all-inclusive sense.

⁶ United States Bureau of Labor Statistics, Bulletin No. 458, 1928, p. 3.

⁷ *What Employers Are Doing for Employees*, pp. 17 et seq.

62.3 per cent in manufacturing. For particular industries public utilities and mining are high, both reporting medical programs in more than 90 per cent of the companies studied.

TABLE IV
HEALTH AND MEDICAL ACTIVITIES IN INDUSTRY

Activity	Number	Per Cent of 2,452 Companies Studied
Total number of companies with medical service	1,598	65.2
Dental clinic	113	4.6
Dispensary or hospital	1,154	47.1
First aid, organized	1,330	54.2
Health promotion	366	14.9
Nurse, plant	867	35.4
Nurse, visiting	366	14.9
Optical clinic	179	7.3
Physical examinations		
New employees	1,124	45.8
Periodic	471	19.2
Type not specified	20	0.8
Physician		
Part-time	487	19.9
Full-time	235	9.6
On call	932	38.0
Type not specified	5	0.2

Incidence of Industrial Illness

While the statistics on industrial health in the United States are inadequate, there is sufficient evidence to indicate that the incidence of sickness is especially high among the wage-earning population. Studies have indicated that the industrial wage earner loses from eight to nine days each year on account of sickness. While it cannot be said that all of this illness is caused by the working environment, the fact that sickness is more frequent and death rates are higher in the industrial classes than in others is significant. Particularly high are both the severity and the frequency of sickness among workers who handle poisonous substances, such as

those who contract radium poisoning while engaged in painting luminous figures on watch and clock dials. Illness is frequent also among those exposed to dust, fumes, heat, and humidity for long periods.

Unfortunately, too, occupational illness gets much less public attention than do industrial accidents, which have greater dramatic news value. This is true despite the fact that sickness causes many more cases of absence and loss of time than do industrial accidents.

Causes of Occupational Illness

Aside from the diseases caused by fumes, dust, poisonous substances, and temperature, many cases of occupational illness result from the general conditions of work. Much illness results from psychological as well as from physiological causes.

Monotony, long hours, and excessive overtime, which renders it impossible for the worker to get sufficient leisure, are frequent causes of occupational disease. The fatigue poisons that are accumulated in the blood are harmful not only in themselves but also in that they make the body less resistant to disease. Cramped and strained positions of work may impair the action of the lungs and heart. Excessive muscular strain and periods of long standing may result in rupture. Extremes in temperature and bad ventilation result not only in reduced output but in rapid depletion of energy and frequently in respiratory diseases. Other causes of occupational diseases are eyestrain, malnutrition, and lack of proper training in hygiene.

Meeting the Problem

Three provisions must be made by an employer if the problem of industrial health is to be solved to his own satisfaction and to that of his employee. First of all, scientific selection and placement policies must be developed. Obviously, workers assigned to jobs for which they are physically or mentally unqualified represent poor health risks. The incidence of occupational illness among them is certain to be high. Good original selection is not enough. A system of transfers to correct misplacements and a plan of promotion conducive to a healthful mental attitude are no less important. Proper placement is an important part of the health program.

in a less direct way. It allows the maximum earnings so necessary for healthful food, clothing, and shelter.

Second, provision for a healthful working environment must be made. All equipment and processes must be arranged so that hazards to body and health are reduced to a minimum. Hours of work must not be so long as to result in fatigue. They should be reduced to a minimum consistent with economy of operation and the welfare of the working force. Excessive strain must be relieved with rest periods. Provisions for adequate heating, lighting, and ventilation must be made, and clean washroom, bathing, and toilet facilities must be provided. In short, what has been called the "rules of good industrial housekeeping" must be observed.

Finally, efficient and well-planned medical and health service must be provided. Physical examinations must be given, first aid must be administered, minor illness must be treated, health inspection must be held, health education must be conducted, and health records must be kept.

The Physical Examination.—As has been noted before, there is an increasing tendency for business establishments to require certain health standards as a prerequisite to employment. Physical examinations are given to determine what persons are physically qualified for employment and to determine the type of work to which each applicant is suited. But an equally important use of the physical examination is in the periodic re-examination of the employees. In order to see that no diseases contracted during employment reach an advanced or dangerous stage there is no better device than the re-examination. It is only by such periodic check-ups that it is possible for an organization to plan an intelligent and constructive health program or to evaluate the effectiveness of its present one.

Some States require re-examination of employees in certain industries. This is particularly true in those industries where workers handle poisonous substances that endanger their own health, and where workers handle food. But even in the absence of statutory regulation there is a growing number of business establishments that give periodic re-examinations as a matter of policy to certain classes of employees. In addition to these re-examinations, which apply only to certain classes of employees,

there are some companies that re-examine all employees as a feature of general health supervision. Of 453 companies studied in 1930, 11.8 per cent were following this practice.⁸

Medical Treatment.—The medical department of a business should be equipped to handle all first-aid cases. In larger establishments the hospital may be sufficiently equipped to handle the more serious cases involving surgical treatment. While minor illnesses, such as colds, may be treated at the place of work in order to avoid loss of time, it is never desirable for persons other than competent physicians to prescribe for cases of a more serious nature.

Many establishments employ nurses to assist the physicians, or where no physician is employed, to have charge of first-aid work and all health records. One of the more important functions of the nurse is to visit the homes of sick or injured employees after an absence of a day or two, in order to determine whether the illness is being given adequate care. This service, if it is free from the appearance of snooping or policing, can become a very important part of a helpful health program. In many instances the nurse can discover conditions in the home that are responsible for the illness or low productivity of the employee.

In a few companies dental and oculist service is available to the employees. While such service is doubtless of great value, the cost is prohibitive for all but the larger establishments.

The purpose of any health program is control of illness and disease. Little control can be exercised unless full and complete records of causes, frequency, and distribution are maintained. Without such records no company can plan a health program or evaluate the success of its present program.

The National Industrial Conference Board⁹ reports an average annual cost per employee of \$5.10 for a full-time hospital-trained nurse and a well-equipped dispensary. In companies employing more than five thousand workers, the cost was \$3.28 per employee, as compared with \$9.95 per employee in small establish-

⁸ *Medical Supervision and Service in Industry*, National Industrial Conference Board, 1931, p. 39.

⁹ *Ibid.*, pp. 82 *et seq.*

ments. Of this cost, it is estimated that approximately 75 per cent is absorbed in salaries and fees.

Health Education.—One of the more important phases of a health program is health education. Such education may be carried on in a variety of ways. The physical examination offers an excellent opportunity for individual instruction and for securing individual co-operation in the execution of a health program. Such instruction may be given through the medium of handbooks, posters, special bulletins, or plant papers. In a few cases illustrated lectures are given. Some plants follow the practice of holding group classes in health, but it is generally believed that individual instruction is far more fruitful.

One method of securing the employee's interest in the health program is through the formation of an employees' health committee. This committee, either appointed or elected, should be charged with constant inspection for the discovery of health hazards, and the investigation and report of each case of occupational illness. Many companies hold classes for safety and health education, but it is more common for companies to depend upon indirect training through handbooks, posters, bulletin boards, and suggestion systems. Organized contests, under the direction of the training department, are also frequently used.

INDUSTRIAL SAFETY

Every year there are approximately 3,000,000 industrial accidents that result in loss of time beyond the day of injury. Of these about 23,000 are fatal. Ethelbert Stewart¹⁰ estimates that the days lost annually in the United States as a result of industrial accidents approximate 228,000,000, with a resultant wage loss of \$1,022,264,866. To the wage earner the cost is immeasurable. In addition to a tremendous wage loss, there are the cost of physical suffering, payments for medical and surgical service, depreciation of skill, and perhaps permanent impairment of earning power. The employer bears the cost of decreased production, first aid, and hospital service, increased overhead, increased labor turnover,

¹⁰ "Industrial Accidents in the United States," *Annals of the American Academy of Political and Social Science*, Jan., 1926, p. 3.

and compensation awards. The total cost has been estimated as follows:

	DIRECT	INDIRECT	TOTAL
3,000,000 compensable injuries, @ \$246 each	\$738,000,000	\$2,952,000,000	\$3,690,000,000
87,000 minor injuries, @ \$2 each	174,000,000	606,000,000	870,000,000
900,000,000 no injury accidents, @ \$.50 each		450,000,000	<u>450,000,000</u>
Total annual cost			\$5,010,000,000 ¹¹

Edison L. Bowers has pointed out that, despite the fact that war has come to be regarded as the acme of things horrible, fifteen times as many persons have been either killed or injured in industry as have been lost in all the wars of the United States.¹² The problem is one of utmost importance in the manufacturing, mining, and transportation industries, though not insignificant in other businesses.

Causes of Industrial Accidents

The causes of industrial accidents may be classified as either physical or mental. The physical causes are related to the physical environment of the worker—working equipment, machinery, poor lighting or ventilation, dirty surroundings—or are related to the poor physical condition of the worker, such as poor hearing or eyesight.

The mental causes are related to the attitude and general intelligence of the worker. Such causes are ignorance, indifference, carelessness, worry, daydreaming, restlessness, or any other mental trait that is conducive to accident frequency.

Although the number of industrial accidents due to unguarded machinery and to other physical causes is great, it is generally believed that by far the greater number, around 75 per cent, is caused by ignorance or carelessness of the workers themselves. This statement must be weighed carefully since, in many cases, it is impossible to separate the physical from the mental causes, but the evidence seems to be sufficiently clear to indicate

¹¹ H. W. Heinrich, "Industrial Accidents and Safety," *Monthly Labor Review*, Nov., 1930, p. 1116.

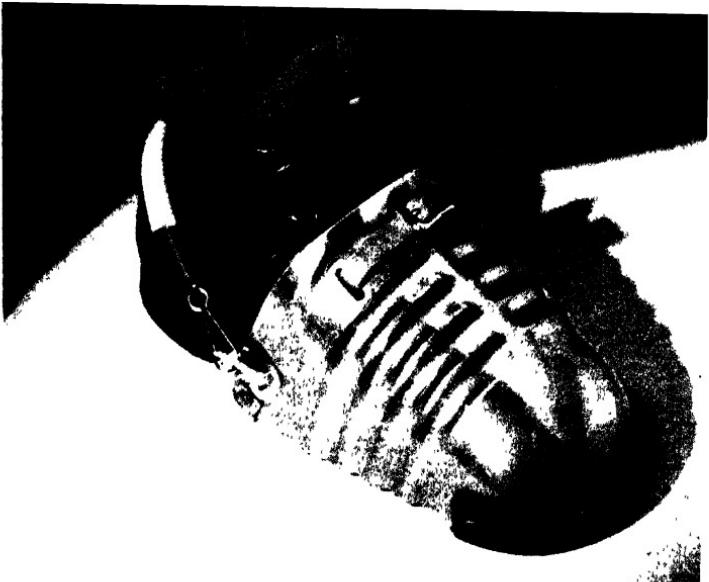
¹² E. L. Bowers, *Is It Safe to Work?* (Houghton Mifflin Company, 1930), p. I.

where the burden of accident prevention must be placed. The physical causes can be remedied by physical appliances readily available to every employer interested in accident prevention. The mental causes present a larger problem in education, the solution of which will depend in a large measure upon the sincerity, persistence, and ingenuity of the employer.

Meeting the Problem

In general, an effective accident prevention program will depend upon the establishment of a two-sided safety organization, one side dealing with the provision of adequate physical and mechanical safeguards, and the other pointed toward the development of a practical educational program. The provision of physical and mechanical safeguards is the logical place to begin a program of accident prevention, and of this the first step is in the constant inspection of mechanical equipment and physical environment to discover the hazards incident to the use and condition of mechanical equipment. This inspection must not be confined to the discovery of needs of safeguards alone, but must also aim to insure proper use and maintenance of those already installed. Each employer must keep abreast of the times, he must install new devices and adopt new methods that will reduce the accident hazard. Constant watch must be kept in those establishments using hand-fed machines, or machines that emit flying particles. Exhaust systems, goggles, and protective clothing must be provided. Pulleys, belts, and gears must be guarded, and alleys and passageways must be kept clear of obstructions. Good lighting and ventilation are also important parts of this phase of accident prevention.

The second phase of safety organization has to do with education. The relative importance of this phase is indicated by the estimate that 86 per cent of the industrial accidents may be attributed to some fault of the workers themselves. Workers who have been accustomed to thinking loosely about accident prevention, or indeed, to not thinking at all, must be taught the importance to themselves and to their families of accident prevention, and must be trained to think constantly in terms of safe working methods. They must be taught that their carelessness is a hazard not to themselves alone, but also to their fellow workers. To ac-

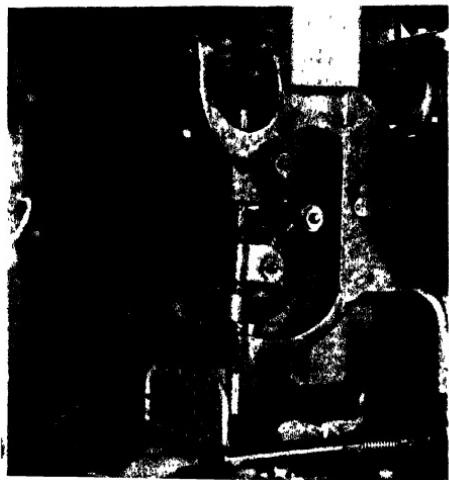


(Courtesy *Factory Management and Maintenance*)

Safety devices, such as this one for the foot, prevent many costly and painful injuries.

Improved safety appliances. Notice that the conventional guard obstructs both finger movements and vision of the worker. The improved guard is made of celluloid and obstructs neither vision nor motion.

(Courtesy *Factory Management and Maintenance*)





(Courtesy Newsphotos)

Homeward bound after the day's work.

Lunch time in one of our large automobile factories.

(Courtesy Newsphotos.)



complish this end, various methods are used. Safety education and advice are brought to the attention of workers through the use of postefs, bulletin boards, and the plant paper. Campaigns and contests between departments are promoted, the department going longest without a lost-time accident being given some special recognition—a “No Accident” banner in the department, medals or buttons to the workers, certificates of safety signed by the president of the company to each worker, a picture of the department workers hung in a conspicuous place, or other similar distinctions.

Personnel of Safety Organization.—In the large business the head of the safety organization is the safety engineer; in the small plant he is the general personnel worker. Whatever his title, his duties are very much the same. Usually they include general supervision of safety work, inspection, counsel with safety committees, execution of committee recommendations, investigation and report of accidents, compilation of accident statistics, and the development of the safety education program.

Working with the supervisor are generally one or more committees, depending on the size of the establishment. In the larger establishment there may be a general safety committee, made up of the supervisor, plant superintendent, and three or four department heads. This committee, working directly with the supervisor, initiates all safety policies, investigates and fixes responsibility for accidents, and passes on controverted matters arising in connection with the accidents. An equally important committee is the one made up of the workers themselves, which is usually charged with the investigation and reporting of all accidents, and with the inspection of and recommendation for accident hazards. This workers’ committee is of particular importance since its recommendations are usually seriously considered by other workmen. To insure general participation by the workers, the committee should be elected by the workers themselves.

Probably the most important single individual in a safety organization is the foreman or department head. Since he is in constant touch with the workers and is familiar with their work requirements and habits, he can do more toward accident prevention than any other person in the plant.

As was suggested in the case of occupational illness, it is imperative that complete records be kept of all industrial accidents. It is imperative both from the standpoint of evaluating the success of the present safety program and of getting factual material upon which to base future accident prevention plans. Such records should be sufficiently complete for a thoroughgoing analysis.

Fruits of Accident Prevention Work

That accident prevention programs are rewarded amply is indicated by the following testimony:

No reportable injury occurred among the 600 employees of the Colonie Shops of the Delaware and Hudson Company during three years and one month in the period 1924 to 1927.

Six hundred employees of the Niagara, Wisconsin Mill of the Kemberly Clark Company worked for 172 consecutive days in 1927 without a lost-time accident.

For three months in 1926, 132 drivers of the Green Cab Company of Cleveland drove their taxis without an accident of any kind.

No lost-time accident happened from January 10, 1925, to November 23, 1927, in the plant of the Union Carbide Company at Sault Ste Marie, Michigan, where an average of 365 men were employed.

During a period of thirteen years (1912-1925) \$15,698,604 was spent for accident prevention work among the subsidiary companies of the United States Steel Corporation. As a result of this expenditure disabling accidents have been reduced 80.07 per cent.

Fourteen years of safety work conducted by the American Car and Foundry Company cost \$1,000,000. Reduced liability and compensation payments during the period produced a return of \$2,700,000. The pattern shop of its Chicago plant has operated since 1911 (sixteen years) without a lost-time accident.

The Louisville (Kentucky) Railway Company reduced claim costs \$150,000 as a result of a one-year accident elimination campaign conducted among employees and the public at a total cost of \$6,621.24.

Seventy thousand dollars were saved in one year, 1925, in the cost of accidents occurring among the longshoremen and other employees of the Southern Pacific Steamship lines through an organized safety movement costing less than \$500.¹⁸

¹⁸ Henry Brûre and Grace Pugh, *Profitable Personnel Practice* (Harper & Brothers, 1929), pp. 189-190.

EMPLOYEE SERVICE

Even though there are distinct limitations as to size, a great many business organizations have developed personnel activities, which, though not essential, contribute to the well-being of the working force and conduce to increased loyalty and efficiency. Insurance and pension plans, saving plans, company housing and stores, recreation programs, legal aid, and restaurants are among the most common.

Insurance Plans

Many companies make arrangements with an insurance company for group policies concerning all of their employees. These may be life, sickness, or accident insurance policies: in some cases policies that cover all three are taken out. Typical of such plans is that in force in the General Motors Corporation. Under this plan employees may take life insurance to the amount of \$2,000, and may draw weekly sickness or accident benefits of \$15.00 for a period not exceeding thirteen weeks. In the event of total and permanent disability, the employee receives a monthly payment of \$52.50 for a maximum of forty months. The employee's share of the cost is \$1.50 per month. In the event of retirement by the company, the employee may continue his life insurance at a cost of \$1.00 a month. Sickness and accident benefits, however, are not continued.

Savings Funds

The General Motors Corporation Employees' Savings Plan is also typical of some of the most carefully planned funds of this type. Under this plan any employee of the General Motors Corporation or its subsidiaries may contribute an amount not to exceed 20 per cent of his annual wage or salary to the Employees' Savings Fund. The company, at the end of each year, pays into the Employees' Investment Fund, and to the credit of the employee, fifty cents for each dollar remaining to the credit of the employee in the Savings Fund. The savings draw 6 per cent interest, and the money in the Investment Fund is invested, "preferably in common stock of the General Motors Corporation." The

accumulated savings are paid to the employee or his family at his death or at the termination of his employment.

A modification of the foregoing plan is in operation at the Omaha plant of Swift and Company, where a Co-operative Credit Association has been formed. Under this plan any employee of the company may become a member of the association by application and by purchase of one share of stock at \$10. Further savings may be deposited from time to time, bearing 5 per cent interest. One of the most important functions of the plan is to make small loans to needy members "for provident and productive purposes." Loans are repaid in weekly installments and an interest charge of 5 per cent is collected in advance. Up to 1932 the association had made loans to the extent of \$65,064.

Stock Purchase Plans

The American Telephone and Telegraph Company has a plan under which its employees are allowed to purchase stock in the company at \$100 per share, providing that the subscription of any employee in one year does not exceed one share for each \$300 of his annual income. Payments are made at the rate of \$3.00 a month, the amount being deducted from the employee's wage. Until the stock is paid in full and dividends begin to accrue, the employee is paid 8 per cent on all amounts deducted from his wages. In the event of termination of employment before the stock is fully paid for, the amount deducted from the employee's wages is returned with 6 per cent interest. The company reserves the right to alter or discontinue the plan at any time.

Though stock purchase plans are too recent in origin for accurate measurement of their results, there seems to be fairly general agreement that, if properly planned, they are of great value in encouraging thrift, reducing labor turnover, and improving employee morale. Serious objections can, however, be raised against these plans. If, as happened after the 1929 market crash, the company stocks decline greatly in value, the employees may feel that they have not been adequately protected by the company. In the event that a business fails, the employee loses both his job and his savings.

Pension Plans

Because of their wish to assure employees of at least a living when they have passed the age of usefulness in industry, and as an added incentive to efficient workmanship, some companies have installed employee pension plans. A representative plan is that in operation for the employees of Swift and Company, under which male employees of twenty-five years of service or who have reached the age of fifty-five draw a pension amounting to one-half of the average annual salary computed on the five years preceding retirement. Persons entering the employ of the company over forty years of age are not eligible for the pension. The plan provides also for pension payments to the widow and dependent children in the event of death of the pensioner.

While there can be no criticism of the idea behind the payment of pensions, they have worked a hardship on older workers seeking employment. Many companies with pension plans refuse to employ workers over forty years of age on the ground that the older employee's working life will not be long enough to warrant the payment of a pension. Moreover, the reputation of pension plans has suffered at the hands of unscrupulous employers, some of whom have attempted to save money by discharging men who were about to become eligible for a pension.

With the adoption of the old-age pension provisions of the Social Security Act it is to be expected that most of the private pension plans will be discontinued.

Company Housing

As a result of legislation prohibiting factories in certain districts and because of a lack of room for expansion, a great many manufacturing companies are forced to move from the crowded cities into districts that are not equipped with sufficient houses to take care of large numbers of employees. Though the companies, in most instances, encourage others to undertake the responsibility of furnishing houses for their employees, many are forced to launch upon a housebuilding program of their own. Of the many difficulties, methods of financing are probably the greatest, but problems of maintenance and control are nearly as serious. Aside from these difficulties the principal objection concerns the effect

upon the mobility of the workers. To change from one employer to another means that the employee living in a company-owned house must move out of one and into another even though the new job is in the same community. There are serious limitations upon the worker's independence. The worker living in a company house is much less free to stand for his rights in times of industrial disputes. Despite these disadvantages industrial housing may be a practical necessity.

Company Stores

One method of increasing the real wages of workers is to lower the prices that they must pay for the goods they purchase. Realizing the incentive value of such a plan some companies have installed company-owned stores at which employees can buy food, clothing, fuel, and other commonly used products. Typically, the employee who patronizes the company store pays a small amount, say \$5.00, into the store at the beginning and a similar amount each time he draws an amount of goods equal to his balance in the store treasury. In most instances company stores are operated without profit for the benefit of the employees, but there are stores that make a 10 to 25 per cent profit, which is turned over to some employee organization, such as a mutual benefit society.

Usually the company store offers real purchasing advantages to the employees, but when, as occasionally happens, the employer pays a part of the wages in scrip which is redeemable only at the company stores, the employee's freedom of purchase is greatly restricted. This evil is magnified in those cases where company store prices are higher than those prevailing in other retail outlets.

Other Service Activities

The realization that a cold lunch eaten from an unappetizing "dinner bucket" is not conducive to health or happiness of workers has led many companies to install plant restaurants or cafeterias where employees can secure and eat wholesome food at a moderate cost and in a pleasant environment. They are particularly valuable in plants where heavy work requires warm food or food that is not adaptable to packing.

Some of the larger companies, the United States Steel Cor-

poration, for example, provide clubhouses for the use of employees and their families which boast reading rooms, libraries, gymnasiums, swimming pools, baths, dance halls, billiard parlors, and halls for motion pictures, lectures, and concerts. Department stores frequently maintain comfortable rest and reading rooms for the use of their employees.

Much has been done to encourage garden work among employees. This is frequently done either by offering unused ground adjacent to the plant for community gardening or by providing individual plots. The United States Steel Corporation plots the ground, plows it at its own expense, and offers prizes for the best gardens. Some companies assist their employees in the purchase of garden tools, seeds, and other equipment.

Other service activities include provision for dismissal wages, playgrounds, vacations, picnics, baseball leagues, and musical organizations. Because of the expense involved, most of these activities cannot be engaged in except by the larger companies.

PERSONNEL RESEARCH

Just as research is indispensable in the field of the natural sciences, so is personnel research essential to the successful development of good personnel administration. Problems arise every day which can be solved only in the light of known facts. Before new personnel activities are engaged in, sufficient investigation should be made to establish their worth and reliability. Old practices should be subjected to analysis for modification and improvement. The scope of research varies greatly according to the size of the establishment and the amount of money available, some of the smaller companies being forced to confine their research to the most essential problems, and the larger establishments spending thousands of dollars yearly on personnel research projects. In the small company one person who constitutes the entire personnel staff may do only that research incidental to the successful performance of his limited personnel duties. In a larger company, such as the United States Steel Corporation, several persons, members of the general personnel staff, may spend their entire working time on the formulation and publication of research projects.

The Research Program

A complete personnel research program might include (1) analysis and validation of employment tests; (2) inquiry into worth of the application blank; (3) analysis of jobs to improve the content of training courses; (4) experiment in teaching methods; (5) analysis of causes and effects of fatigue; (6) analysis of work methods; (7) correlation of living costs with wage policy; (8) analysis of employee attitudes, i.e., an inquiry into the likes and dislikes of the employees in regard to their jobs, their environment, and their supervisors; (9) the establishment and maintenance of contacts with other businesses similarly situated for the purpose of keeping abreast with personnel development; (10) study of labor law development; and (11) the periodic labor audit for the purposes of evaluating the effectiveness of present personnel policies and practices and of discovering the need for expanded activities.

Much valuable personnel research is done by outside agencies, the results of which are available to individual establishments for a fee. Examples of these are the American Management Association, the National Industrial Conference Board, and Industrial Relations Counselors, Inc. Many valuable studies are made by the Policyholders' Service Bureau of the Metropolitan Life Insurance Company. The American Museum of Safety, operated in connection with the New York State Department of Labor, contributes a great deal in the field of accident prevention. Other personnel studies are made in the research departments of colleges and universities. The Wharton School, for example, has undertaken studies in labor turnover, absenteeism, industrial accidents, earnings, and the condition of the labor market. In the field of industrial psychology, university departments of psychology make invaluable contributions.

DEPARTMENT ORGANIZATION

Successful operation of a personnel department depends not only upon the scope of activities and the spirit of the labor policy but also upon the organization of the department, i.e., upon the way in which authority and responsibility are delegated and as-

sumed. While there is no typical personnel organization that will serve the needs of every company, a description of a well-functioning department will serve to illustrate how a department may be organized.

The Head

The director of personnel works essentially in an executive capacity. He is responsible for the initiation and formulation of the general labor policies, and for keeping the management informed as to new developments in the field of personnel. Since the responsibility for specific results necessarily lies with the heads of operating departments, the personnel manager is expected to put the labor policies into effect by instructing department heads not only in general policies but in the details of operation as well. He is charged with the duty of seeing that the personnel program is given the same attention that is given the other factors entering into the expense of operation.

In addition to the broader duties outlined, the personnel manager has general supervision over employment, including selection and placement of new employees. A major duty here is the cultivation of sources of labor supply. Typically he takes active charge of personnel budgeting and of the mutual benefit program. He is directly responsible for all personnel records (though in a large organization a clerk may actually prepare them) and for expenditures and receipts for any of the personnel activities that may involve financial transactions. He develops and supervises all training courses. A great deal of the personnel manager's time is necessarily spent advising with heads of other departments and with foremen and supervisors.

Assistants

The number of assistants is determined largely by the industry and by the size of the plant. In a large organization, there may be one or two assistants in charge of employment and records —a man to interview and place employees and to handle grievances of the male working force, and a woman for the female workers. In one organization employing 2,300 employees, the former also conducts most of the training courses and has charge of the recreation program. The woman assistant prepares all records,

is the company librarian, and supervises the operation of the company cafeteria. The services of one stenographer and file clerk are available to the two assistants.

A doctor and nurse complete the personnel staff. Frequently the doctor is at the plant only two or three days each week and is on call at other times. An important part of his work is that of safety and sanitation engineering. The nurse (male), in addition to having charge of the first-aid room, may have direct charge of physical examinations, compensation insurance, and medical benefits. He serves on the safety committee also.

In organizations employing from five hundred to a thousand employees, one man may constitute the personnel staff. In cases where the personnel program is not highly developed, one man may find it necessary to give only a part of his time to personnel functions.

S U M M A R Y

One of the more important parts of the personnel program is that having to do with employee health. Although the health hazards are more apparent in manufacturing and mining enterprises, health service has become an important part of the personnel program in such businesses as insurance, banking, and merchandising. In practice the health programs include physical examinations, provision of a satisfactory working environment, employment of physicians and nurses, and, most importantly, the development of an adequate health and safety educational program.

Although employees cannot, as a rule, be bribed into drudgery, the introduction of financial incentives is of primary importance. Almost all companies use either the straight time-wage or the piece-rate method, but there has been a growth in the popularity of special incentive systems in the manufacturing industry. Office employees and those in banks are usually paid a straight time salary. Retail store salespersons and salesmen on the road frequently receive at least a part of their income in the form of commissions.

A few companies furnish additional financial incentives through the use of profit-sharing plans, savings plans, stock purchase plans, and pensions. Some make additional savings to their

employees through the establishment of company houses and stores.

A few of the larger companies render employee service in the form of gardening assistance, dismissal wages, and recreation programs.

Facts furnish the foundation upon which intelligent personnel management is built. This necessitates the performance of many personnel research functions. Although research programs vary greatly according to the needs of the business, they include such activities as the validation of selection methods, training programs, systems of wage payment, and the determination of improved work methods.

The personnel organization varies, in small businesses, from one person who spends a fraction of his time in personnel work to the large staff of full-time personnel workers in a large enterprise.

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PROBLEMS

1. "If employers would only pay additional wages the problem of industrial unrest could be solved." Do you agree with this statement?
2. "Society is as much interested in the question of worker incomes as are employers and workers." What evidence is there in support of this statement?
3. What are the advantages and disadvantages of the piece-wage system? The time-wage? It is commonly suggested that the use of the piece-wage system is preferable to the time-wage. If so, why is not the piece-wage plan used universally?
4. "The piece-wage substitutes individual competition for class consciousness and for that reason should be avoided." What is meant by this statement? Is it an argument of employers or of employees? Why?
5. What are the advantages of the special incentive systems such as the Taylor plan and the Halsey plan? What disadvantages occur to you?
6. "The conflict between employer and employees would disappear if the employer would share profits with the employee." "Profit sharing in industry is a snare—an attempt on the part of the employer to bribe the worker into a state of passive acceptance." What basis can there be for each of these statements?
7. While you are home on vacation your former high school principal asks you to make a talk to the senior class on occupational illness. Outline in detail the talk that you would give.

8. Make a list of the personnel uses of the physical examination
For what types of business is a physical examination necessary?
9. Visit three or four local business institutions, either commercial or industrial, and, as a result of your observations, make recommendations for improved employee safety and health.
10. "Stock purchase plans, company housing plans, and company stores do more harm than good. They interfere greatly with a worker's independence." Do you agree with this statement? Why or why not?
11. Draw up recommendations for a personnel research program in a department store employing 800 salespeople. Give reasons for each suggestion. How would these suggestions differ from those involving a manufacturing establishment with the same number of employees?

CHAPTER XVI

PERSONNEL PRACTICE: JOINT RELATIONS

Modern economic society has so developed that a wide gap almost inevitably appears between employers and employees. In these days of absentee ownership and large industrial organizations almost all personal contact between managers and men is lost. As a result the employers have no more understanding of the problems of the workers than have the workers of management problems. This lack of understanding results in mutual fear—the worker's fear of unemployment, unfair treatment, lockouts, industrial accidents, and occupational disease; the employer's fear of an inadequate supply of labor, inefficiency, strikes, sabotage, restricted output, and the like. These fears, in turn, result in lower productivity, higher labor costs, and diminished wages. The need, then, for promoting a better understanding between employers and workers is obvious—an understanding that comes only through an arrangement whereby employers become better acquainted with the problems of the workers, whereby employees are made familiar with management problems and are given some voice in the control of conditions under which they work. These arrangements are usually made through either an employee representation plan (sometimes called a "company union") or through an outside labor organization.

E M P L O Y E E R E P R E S E N T A T I O N P L A N S

Purpose

Employee representation is one of the devices that have been introduced into many establishments for the purpose of overcoming this lack of personal contact and resultant misunderstandings. Employee representation may be defined as a plan under which the employees of a business enterprise, through elected representatives, share jointly in the discussion, determination, and adjust-

ment of the conditions under which they work. While the purpose of employee representation varies from establishment to establishment, most plans are devised to accomplish some or all of the following purposes:

1. To promote justice in the relationship between workmen and management.
2. To insure an equitable consideration of the grievances and complaints of employees.
3. To furnish workers a means of exercising an appropriate measure of control over their own conditions.
4. To provide a means of collective dealing between employer and employees.
5. To facilitate the exchange of information and an understanding between management and working force.
6. To increase efficiency and loyalty of labor.

Unfortunately, many of these plans have been established for the purpose of forestalling the development of an outside trade-union.

Structure

Structurally, employee representation plans may be classified as the federal type and the committee type. The first derives its name from the United States government, after which the organization has been patterned. In its pure form there are three bodies: (1) a house of representatives made up of employee representatives; (2) a senate composed of foremen, supervisors, and minor executives; and (3) a cabinet composed of the major executives of the company. Legislative bills may originate in either the house or the senate. The cabinet, while it does not in most cases originate bills, sits as the executive body for consideration of the bills originating in the two lower bodies. To become effective, all bills must have the approval of all three bodies.

It should not be inferred that all federal plans are alike. As a matter of fact, there are many variations: some companies have no cabinet, some have a cabinet and only one legislative body composed of employees, foremen, and minor executives.

The committee type of employee representation is much more common. Under this plan, sometimes called the "conference plan," the elected representatives of the workers deal with the manage-

ment representatives largely through conferences and committees composed of an equal number of management and worker representatives. As was suggested in the discussion of the federal type, there are many structural variations, although essentially they are all very much the same. Typically, there is one major plant committee composed jointly of representatives of the management and workers. Joint committees are also elected for each department or other political division of the plant. In addition

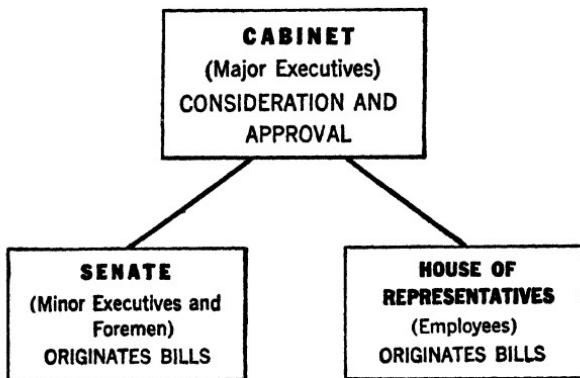


FIG. 27.—Employee representation plan—Federal type.

to these bodies, which originate and dispose of all bills, the president of the company or a board of arbitration usually hears appeals in the event of disagreement with the joint committees.

The committee type has been frequently criticized on the ground that workers do not feel free to state their own viewpoints before representatives of the management, but experience seems not to bear this out. It is generally felt that the greatest advantage of the committee type is in the mutual exchange of ideas before a definite stand is taken.

Prevalence of Employee Representation Plans

During the years that immediately followed the World War employee representation plans were for the most part confined to manufacturing businesses. In the years that followed, these plans spread rapidly to nonmanufacturing business. By 1936 employee representation was as common in nonmanufacturing busi-

less as in manufacturing business. The National Industrial Conference Board¹ reports a study of 2,075 manufacturing plants of which 644, or 31 per cent, had employee representation plans. The same study covered 377 nonmanufacturing businesses (banks, insurance companies, public utilities, mercantile establishments, and service industries) of which 107 or 30.6 per cent had employee representation plans. Such plans are more common in busi-

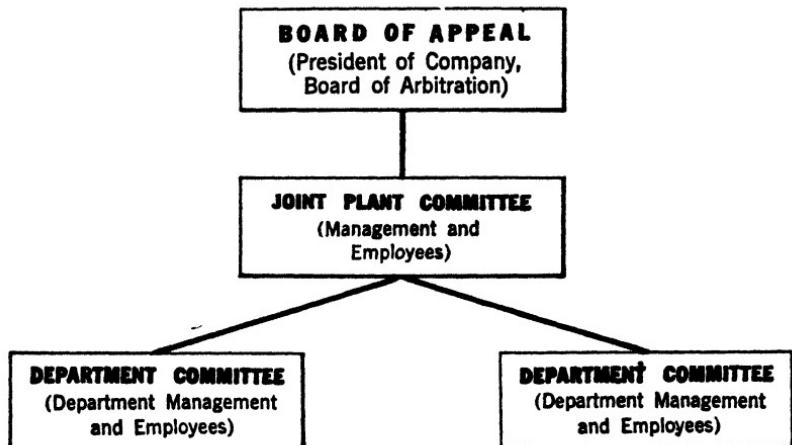


FIG. 28.—Employee representation plan—joint committee type.

nesses employing more than a thousand workers than they are in the smaller enterprises.

Legal Restrictions.—Despite the rapid spread of employee representation in the past, it is probable that future expansion will be confined to businesses which are strictly intrastate in character. On July 5, 1935, the President approved the National Labor Relations Act (sometimes called the Wagner Labor Act) which was sustained on April 12, 1937, by the United States Supreme Court in a series of five decisions² touching on all phases of the Act.

¹ *What Employers Are Doing for Employees*, p. 30.

² *The Associated Press v. National Labor Relations Board*, Docket No. 365; *Washington, Virginia and Maryland Coach Company v. National Labor Relations Board*, Docket No. 469; *National Labor Relations Board v. Jones and Laughlin Steel Corporation*, Docket No. 419; *National Labor Relations*

This Act prohibits "unfair labor practices" which affect or obstruct interstate commerce and provides for a National Labor Relations Board to administer the law. Section 7 of the law provides that employees "shall have the right to self-organization, to form, join, or assist labor organizations, to bargain collectively through representatives of their own choosing, and to engage in concerted activities, for the purpose of collective bargaining or other mutual aid or protection."

Section 8 of the Act is of special importance in its relation to the future of employee representation. This section provides, among other things, that it shall be an "unfair labor practice" for an employer (1) to interfere, restrain, or coerce employees in the exercise of their collective bargaining rights, or (2) to dominate or interfere with the formation or administration of any labor organization or to contribute financial or other support to it.

It should not be supposed that all employee representation plans violate the National Labor Relations Act. In the past, however, most representation plans have been installed and supported by employers, and this practice clearly falls within the prohibitions of the law. It is possible that some employee-initiated representation plans will continue even in interstate businesses, but, to repeat, future development of these plans will probably be confined to intrastate business.

Prerequisites to Success.—In those businesses where employee representation plans continue to operate it will be necessary for certain principles to be observed. The structural formation is important, to be sure, particularly with reference to the rapidity with which adjustments are made and issues are settled, but the structure is useless unless basic principles are recognized and closely adhered to.⁸

1. The scope of activity must not be confined to issues of minor importance. Discussions as to where the company picnic shall be held or the design of the company baseball uniforms are of little interest or importance to the workers. If subjects such

Board v. Fruehauf Trailer Company, Dockets No. 420 and 421; and *National Labor Relations Board v. Friedman-Harry Marks Clothing Company, Inc.*, Dockets No. 422 and 423. All decided on April 12, 1937.

⁸ For a complete treatment see Edward S. Cowdrick, *Man-power in Industry* (Henry Holt and Company, 1924), pp. 114-134.

is wages, hours of work, and physical conditions of employment are barred from consideration, the incentive value of employee representation will be slight.

2. The power of the worker representatives should be genuine. The employer who limits the representatives of the workers to a purely advisory or perhaps argumentative function should not be surprised if the workers manifest no interest in the project.

3. All classes of employees should be adequately represented. It makes no great difference as to how voting districts are divided as long as the districts are relatively small and the representative for the district is familiar with the problems of his constituents. Even in view of the danger of duplicate representation it is probably wise to have racial, national, and sex representatives as well as departmental representatives.

4. It is imperative that election be by secret ballot and that some precaution be taken to guard against interference with freedom of choice from any source. In the absence of such precautions a few ambitious and unscrupulous employees may completely dissipate the benefits of the plan and cause a general falling off in interest.

5. Every precaution should be taken to see that the employees' representatives are not discriminated against for activities or expression on behalf of their fellow workers. The representatives should not be given any special privileges or consideration not accorded to other employees, but they should be allowed complete independence without regard to consequences and without fear of reproof from their supervisors.

6. It is necessary that the workers be given access to the records of the business. No working force can be expected to give serious thought or interest to a business about which they know nothing. If a demand for wage increases is to be refused, the refusal, to be acceptable, must be based upon facts—facts known to the employees as well as to the employer.

7. To be successful, an employee representation plan must make provision for appeals from decisions that the workers think unjust. While it is true that workers are never denied the right to strike (an appeal to their own force), the right of peaceful appeal, to an outside body preferably, is of greatest importance

as a matter of protection to the worker and as an evidence of the employer's good faith.

Limitations upon Employee Representation Plans

Careful observation of the foregoing principles has resulted in the continued success of many employee representation plans, but such plans are subject to definite limitations. In the first place, employee representation plans originate in the will of the employer. Their existence, therefore, is precarious. The membership is limited to the employees of one plant and there is no convenient method by which the employees can establish and maintain contacts with other workers in other plants. In other words, employee representation plans do not provide machinery with which workers throughout an industry can jointly attack a problem of concern to all workers irrespective of location. These plans, moreover, do not erase the great disparity of bargaining power which exists between employers and employees. The combined resources of the workers in one plant are usually no match for the "waiting power" of a substantial employer. This is particularly true in the event that the employer is a member of a large business combination such as the United States Steel Corporation or the General Motors Corporation.

Company Rules and Regulations

In those organizations that do not have employee representation plans the personnel manager has a group of functions having to do with the formulation, publication, and enforcement of company rules. He is expected, either alone or with the counsel of other executives, to codify the rules, regulations, and conventions of the company in order that every person in the plant will have a definite idea of what he may expect from the company, and of what the company expects from him. In many instances these rules are published in a handbook of convenient form and distributed to all employees. Bulletin boards, posters, and leaflets are also used, the form being of less importance than the assurance that every employee understands the rules. The scope of the topics covered by rules and regulations is seen in the *Employees' Handbook* distributed by Swift and Company. They are time, pay day, sickness protection of service record, change of address, tele-

phone calls, passes, toilet and dressing room facilities, promotions, the plant assembly, vacations, hours of work, wage payment plan, accident and sickness, personal help, the suggestion system, the plant newspaper, safety, fire prevention, smoking, waste prevention, Americanization, supplies for employees, the Employee's Benefit Association, pensions, and stock purchases.

Perhaps the most important phase of company rules and regulations is the manner of their adoption. Experience indicates that workers resent rules that are imposed upon them in a dictatorial fashion. The wise approach is through co-operation. The workers should, as far as possible, be self-disciplined, which means that rules should not be laid down by the management, but instead should be adopted only after joint discussion, understanding, and agreement. Rules should be positive and constructive rather than punitive; they should appeal to reason rather than to fear.

BARGAINING WITH LABOR UNIONS

There are many workers who feel that employee representation plans do not adequately protect their interests, that their interests can be protected only by outside worker-formed and worker-controlled organizations such as the labor unions. A labor union is a formal association of working men and women for the purpose of improving their economic lives.⁴ The major portion of labor union energies is directed toward the improvement of wages, hours, and other conditions of employment, but much energy is directed also toward the solution of problems not connected with employment. Many unions, for example, pay unemployment and health benefits and direct social, recreational, and educational programs for their members and their families.

History of Labor Unions

The first labor unions in the United States seem to have been organized between 1790 and 1800. During the colonial period

⁴ The term "labor union" in the strictest sense refers to an organization of this type to which all workers may belong, regardless of occupation and industry. In this strict sense it is not to be confused with a *trade-union*, which admits to membership the workers of a particular trade or craft only, or with an *industrial union*, which admits to membership all workers of an industry, regardless of craft.

there were, to be sure, workmen's organizations, but they were friendly and benefit societies which in many instances admitted employers to membership. It was not until after the appearance of the "merchant capitalist" that these workmen's organizations became labor unions. The "merchant capitalist" was a middleman engaged in importing goods into a community and selling them at prices with which the local merchants and producers could not compete. Local employers attempted to meet this new competition by reducing the wages paid to their employees, and it was in opposition to this that labor unions, formed as protective devices, were organized.

The first labor unions were organizations of skilled craftsmen and appeared first in the large cities. The first crafts to organize were the tailors, carpenters, shoemakers, and printers. These unions were local in character, having no formal connection with other crafts in the same community or with workers of the same craft in other localities. This characteristic, however, is understandable in view of the fact that economic life generally was localized. Transportation facilities were very poor and the products of one community did not offer serious competition with those of another.

During the first quarter of the nineteenth century these labor organizations made many demands for improved working conditions and attempted to enforce their demands by using the strike, the closed shop, the boycott, and walking delegates (called "tramping committees"). Most employers resisted the demands of the unions and in many instances appealed to the courts for protection. In the early cases to come before the courts the unions were held to be illegal conspiracies under the common law, a fact which retarded union growth for many years. In later cases, however, the courts admitted the legality of workmen's combinations but closely scrutinized whatever means they used to attain their ends.

During the prosperous years from 1830 to 1835 labor unions grew rapidly. By 1836 the membership of all unions approximated 300,000 and in Philadelphia alone there were fifty-four unions.⁵ From 1834 to 1836 there were a few scattered attempts

⁵ Mary Beard, *A Short History of the American Labor Movement* (George H. Doran Company, 1924), p. 49.

to form national labor organizations but none met with success. There were too many city delegates who were interested only in local problems; moreover, transportation methods had not yet developed sufficiently to create a consciousness of problems outside of the local community.

Labor union prosperity disappeared with the coming of the panic of 1837, and, as is true in all periods of business depression, the union membership fell off greatly. From 1837 to 1845 there were very few attempts to improve immediate conditions of employment. Instead, the few who remained active in labor organization work turned their attention to politics and to the discussion of utopian plans for general improvement.

The Civil War Period.—About 1845 general business prosperity returned to most sections of the country. Mechanical inventions were being adapted to manufacturing processes. The development of many agricultural implements gave rise to unprecedented agricultural prosperity. The railroads were rapidly being extended into the West, and in 1848 many important gold deposits were opened up in the Far West. All of these events combined to produce a widespread prosperity and a resulting general rise in prices.

As a means of protecting their standard of living, workers returned in great numbers to the labor organizations. Numerous demands for wage increases were made and a general wave of strikes followed the first refusals of the employers. Beard estimates that there were more than four hundred strikes in 1853 and 1854.⁶ This period marked also the beginning of permanent national labor unions. It was in general a period of remarkable growth, for there were about thirty national unions with 300,000 members by 1870.

The Knights of Labor.—The first important all-inclusive national labor union was the Noble Order of the Knights of Labor, founded in 1869 under the leadership of a Philadelphia garment worker, Uriah S. Stevens. In the beginning the Knights of Labor was a secret society that admitted skilled, unskilled, and white-collar workers of all industries. It provided even that one

⁶ *Ibid.*, p. 64.

quarter of its membership might be made up of employers of labor. At the outset it placed reliance for social reform upon widespread education and upon producer's co-operatives, but in the early eighties it found itself engaged in a number of strikes for the immediate improvement of the wages and the working conditions of its members.

Having dropped its secrecy, the Knights of Labor attracted a very large membership in a few years, reaching a maximum membership of well over 700,000 in 1886. The prosperity of the Knights was not of long life. Three things conspired to bring about its decline. In the first place, it allowed itself to be drawn into a series of long and expensive strikes, most of which were lost as a result of poor leadership and ignorance of strike technique. In the second place, the organization became the victim of internal dissension rising from the conflicting political philosophies of the leaders. Finally, there was dissatisfaction on the part of many members. The skilled workers in the Knights of Labor were convinced that the presence of unskilled workers in the organization and the presence of many diverse crafts prevented the attainment of the organization unity and solidarity necessary for success. They wanted closely knit *trade-unions* composed of workers of a particular craft only. Moreover, they were not interested in the development of long-range political ideals. The skilled workers wanted, instead, immediate improvement in wages, hours, and other conditions of work. The defection which resulted from this dissatisfaction gave rise to the present nominal leader of the American labor movement, the American Federation of Labor. In 1881 delegates representing the dissatisfied workers met in convention and formed the Federation of Organized Trades and Labor Unions. In 1886 at a convention in Columbus, Ohio, it changed its name to the American Federation of Labor. The fight between the Knights of Labor and the new Federation was bitter, but the Knights rapidly lost power and influence. From 700,000 in 1886 the membership of the Knights fell to approximately 100,000 in 1890.

The American Federation of Labor.—The American Federation of Labor is primarily, in principle at least, an association of national craft or trade-unions. There are, to be sure, unions affili-

ated with the Federation that include workers of more than one craft, but the national craft unions remain the dominant influence.⁷ There are about ninety-five national or international (so called because of local unions in Canada) unions affiliated with the Federation. There are federations of labor in every State and every important city, and there are approximately 1,300 "Federal Labor Unions" directly affiliated. These Federal Unions are local organizations made up of workers from many crafts or of workers who have no craft identification. In addition to these, there are four departments (railway employees, union label, building trades, and metal trades), which co-ordinate the work of the craft organizations in these industries.

Although the final authority of the A.F. of L. rests with the annual convention of delegates, the administrative body is the Executive Council. Because the A.F. of L. is a loosely formed federation of unions, the Executive Council has little authority over affiliated unions. Its chief functions are advisory. It promotes legislation useful to the labor movement, it assists in organization programs, and it spends much time in the settlement of jurisdictional disputes between unions whose fields of operation overlap.

The A.F. of L. is conservative in both philosophy and action. It accepts the present economic organization of society and works only to improve the lot of the wage earner in the existing system.

The Committee for Industrial Organization.—The most recently organized labor group in the United States is the Committee for Industrial Organization. Its membership is drawn from unions formerly affiliated with the American Federation of Labor. The C.I.O. is related to the American Federation of Labor in the same way that the A.F. of L. was related to the old Knights of Labor organization. The formation of each resulted from dissatisfaction with the leadership and operation of the parent organization.

In November of 1935, the delegates of eight international unions, affiliated with the A.F. of L., met for the purpose of per-

⁷ This is indicated by the influence exercised in September, 1936, by the craft groups in securing the expulsion of fourteen national unions from the American Federation of Labor. The expelled unions were advocates of the industrial form of unionism.

feting an organization within the A.F. of L. which would carry on a militant organization campaign in the unorganized industries. The delegates justified their action on the grounds that (1) the A.F. of L. had been able to organize only three million of the thirty million wage earners; (2) the principle of craft unionism had been rendered obsolete by technological improvement and the development of mass production industries; and (3) the failure of the A.F. of L. to organize the unskilled workers was a violation of the principle of democracy to which all unions were committed. Although the new organization intended to remain in the A.F. of L., it declared its intention of organizing all of the workers in the mass production industries into industrial unions regardless of the claims of the craft organizations.

Because of these activities the Executive Council of the A.F. of L. ordered the C.I.O. to withdraw its plans. This order, however, was ignored and the unions affiliated with the C.I.O. were suspended from the A.F. of L. by the convention of delegates held in 1936.

In the summer of 1937 the membership of the unions affiliated with the C.I.O. numbered approximately 2,500,000. Very soon after its organization, it called a number of strikes that resulted in at least partial victories in the automobile and steel industries. The C.I.O. strikes in the automobile industry brought the "sit-down" method into prominence.

Although the battle for supremacy is barely begun, developments seem to indicate that the C.I.O. is well on the way to becoming the most influential labor organization in the country. Organization along industrial lines, vigorous union leadership and favorable legislation seem to favor the C.I.O.

Other Independent Labor Organizations.—There are two other important labor groups that are not affiliated with the American Federation of Labor: the "Big Four" Railway Brotherhoods (locomotive engineers, enginemen and firemen, trainmen, and conductors) and the Trade Union Unity League. The Railway Brotherhoods are craft organizations that were organized in the Civil War period. Their combined membership was about 268,000 in 1934.*

* Leo Wolman, *Ebb and Flow in Trade Unionism* (National Bureau of Economic Research, 1936), pp. 184-186.

The Trade Union Unity League is associated in the minds of most persons with "radical" political philosophies. It consists of industrial unions operating in ten industries and has an approximate membership of 61,000.⁹

White-Collar and Professional Unions.—The white-collar and professional classes in the past have showed no inclination to identify themselves with the other working classes. They have, as a matter of fact, identified themselves, in their own minds at least, with the employer group. As a result there are relatively few white-collar and professional trade-unions. Their total membership in the United States probably amounts to about 225,000 which includes artists, retail clerks, government employees, teachers, actors, musicians, architects, and news writers. Of this total number the musicians' unions account for approximately 100,000.¹⁰

Methods of Organized Labor

As has already been pointed out, labor organizations direct most of their energies toward the improvement of wages, hours, and conditions of work. As is to be expected, they have developed methods of enforcing their demands. A few of the more important will be described.

i. The *trade agreement* is a contract entered into between a labor union and an employer or a group of employers. It results from joint negotiation over the terms of employment and it usually includes provisions covering methods and amount of pay, hours of work, general conditions of employment, and machinery for the adjustment of industrial disputes. The trade agreement is, in short, a reflection of joint participation of management and workers in the control of industry.

When trade agreements are fairly drawn between strong and reliable unions and employers, they give much-needed protection to employers, workers, and communities. The employers are guaranteed an adequate and stable labor supply under stipulated conditions of pay and work. The employees are assured of employment under conditions that they themselves have helped to make.

⁹ *Ibid.*, p. 144.

¹⁰ *Ibid.*, p. 188.

The community is insured against interruptions in production and other inconveniences incidental to labor struggles.

It is frequently claimed that the benefits of trade agreements are nullified by the fact that workers are quick to breach an agreement if it appears to their advantage to do so. This is not borne out by the facts. In the past employers have been in this respect no less culpable than workers.

2. The *closed shop* is a business establishment in which the management employs only certain classes of workers. In the closed union shop the management agrees with a labor organization to employ only members of that union. In those instances in which the membership of the union is closed or limited, the closed shop narrows the choice of the employer to the workers who are already union members. In most instances, however, the closed shop agreement provides that the employer can hire whomever he pleases but that all persons employed, if not union members, must join the union when they accept employment. In either case the closed union shop is an attempt on the part of the workers to control the labor supply and, indirectly, the conditions of employment.

Most employers object to the closed shop on the grounds that they have a right to employ whomsoever they please and that non-union workers have the right to accept employment wherever they please without regard to union affiliation. These objections have resulted in the "American plan" or *open shop*, in which in theory both union and nonunion workers are employed on equal terms. There are, however, few true open shops. Most open shops, if not actually closed nonunion shops, are shops in which union members can maintain their employment only if they are inactive in union affairs. The management in most open shops does not bargain collectively with union members.

3.. The *strike* is a concerted quitting of work, together with an attempt to keep other workers from taking the jobs thus vacated. It is the abandonment of employment without relinquishing the rights to the jobs. The strikers maintain that the jobs vacated are theirs and that they want them back when conditions of employment are improved. The strike is labor's most widely publicized and strongest weapon. It stands as a constant threat against those employers who refuse to negotiate the terms of employment with representatives of the working force. Although

strikes are most frequently called by labor unions, many strikes have been carried out by unorganized workers.

The number of strikes increases rapidly in prosperous times and decreases in periods of business decline or depression. The increase in a period of business prosperity (a period of rising prices) is to be accounted for chiefly by the fact that under prevailing wages the worker's standard of living is threatened. Demands for wage increases are made and are refused by the employer. In the absence of a willingness on the part of the employer to negotiate a wage agreement the worker uses his most effective bargaining tool. In periods of business depression strikes decrease in number. Unemployment is widespread and union strength is on the decline. The employer, moreover, may be very little inconvenienced by a strike at a time when he is under no pressure to maintain his production schedule.

The aggregate cost of strikes is enormous. Striking employees lose wages, employers lose profits, and society loses in terms of higher production costs. According to the United States Department of Labor reports, 2,000,000 man-days were lost on account of strikes in November, 1936.¹¹

It is doubtless true that many strikes are called unwisely, but it should not be supposed that all strikes result from the agitation of irresponsible workers. In many instances strikes are called only after the refusal of an employer to negotiate an issue in which the employees have a right to a voice. Some employers have induced strikes by refusing to allow workers to affiliate with unions or by refusing to share greatly increased profits in a time of business recovery.

4. The *boycott* is another commonly used labor weapon. Boycotts usually take one of two forms—the primary boycott or the secondary boycott. In the primary boycott the workers as consumers refuse to give their patronage to an employer against whom they have a grievance. They usually try to persuade others to join them in this direct boycott. In the secondary boycott the workers threaten to withdraw their patronage from or call a strike in the business of a third party—usually one who has no direct interest in the dispute—unless the third party refuses to deal with the employer against whom the workers have a grievance.

¹¹ *Monthly Labor Review*, January, 1937, p. 134.

The primary boycott is legal but is only infrequently used because in most cases workers are not direct consumers of the employer's products. The secondary boycott is illegal in almost all legal jurisdictions in the United States.

5. *Union benefit funds* are also effective in assisting the workers to realize their demands. Almost all unions maintain strike benefit funds which are used to feed and clothe workers who are out on strike. The success of many strikes, therefore, depends upon the size of union benefit funds. Unions maintain sickness, death, and unemployment benefit funds also. These funds may not be useful directly in the prosecution of an industrial dispute, but they do serve to bind workers more closely to the union.

Organized Labor and Personnel Administration

In the past the greater part of the time and energy of personnel departments has been consumed by individual personnel problems. Personnel work has been for the most part a matter of selecting, placing, training, paying, and discharging the individual worker. With the passage of the Wagner Labor Relations Act (1935) and the consequent growth of bona fide labor organizations it is to be expected that relatively more of the personnel manager's time will be given to collective bargaining. Personnel managers of the future will need to know much more about the art of collective negotiation than they have in the past. They will need to know much more about the psychology of labor groups than most personnel managers know. Above all they will have to develop a co-operative spirit which comes only from the realization that labor unions do not result from the leadership of "foreign agitators" but are, instead, organizations of sincere men and women who are attempting to improve conditions which they honestly believe to be unjust.

S U M M A R Y

The growth of large business units in modern economic society has resulted in the loss of personal contact between employers and employees. Unless special arrangements are made each has great difficulty in knowing and understanding the problems of the other. To obviate this difficulty many companies have

provided a two-way avenue of communication through employee representation plans. These plans vary structurally, but the conditions prerequisite to success universally apply. In most instances where sound principles of action have been followed employee representation plans have been successful, but the success of all plans is limited. That the existence of the plans depends upon the will of the employer and that they provide no means for joint action of all workers irrespective of location are two limiting factors.

Labor unions are worker-organized and worker-controlled organizations whose purpose is to improve the working life of their members. From the local unions of 1790 they have developed into national organizations extending into all communities and all industries. The largest organization in the United States is the American Federation of Labor but its position is threatened by the recently formed Committee for Industrial Organization. The more common methods used by organized labor to enforce its demands are the trade agreement, the closed shop, the strike, the boycott, and union benefit funds. In view of the recent development of legislation favorable to organized labor, it seems reasonable to expect that the personnel manager of the future will have to spend relatively more of his energy in collective negotiations than he has in the past.

Personnel management is concerned with the effective co-ordination of the activities of all persons in an organization. Successful personnel work is built upon an understanding of the human qualities of a working force and an appreciation of the desire of men to act creatively and co-operatively.

The functions of personnel management are concerned primarily with the employment, development, and maintenance of employees. These functions extend from the highest-paid executive to the lowest-paid worker.

In many cases unscrupulous employers have masked short-sighted paternalistic methods in the guise of personnel management but the benefits, if any, are of short duration. The test of good personnel practice is in the extent to which the activities

result in increased productivity, improved employee welfare, and a more rational working harmony.

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P R O B L E M S

1. What is meant by the term "joint relations"? How do you account for the development of "joint relations" machinery?
2. You have been asked to investigate the wisdom of establishing an employee representation plan. What questions would you ask during the course of your investigation?
3. Draw up a set of statements urging the adoption of an employee representation plan. Be specific.
4. Make a detailed outline of suggestions for a student representation plan to operate in this class.
5. What arguments do labor unions use against employee representation plans? Do the arguments seem sound to you? Why or why not?
6. What are the provisions of the National Labor Relations Act? In the light of this Act, write a two-hundred word essay on the future of employee representation.
7. How do you account for the origin and development of labor unions? Make a list of specific reasons for the very slight development of unions in 1837.
8. Attempts at forming national unions were unsuccessful until the Civil War period. Why?
9. Distinguish between industrial unions and craft unions. Draw up a list of industries in which you think the industrial form of unionism will prevail. Give reasons for the industries selected.
10. How might you account for the fact that the white-collar workers have been slow to organize into labor unions?
11. "Strikes by workers are never justified." "Strikes have contributed much to the American worker's standard of living." Perhaps each statement contains some truth. If so, explain.
12. A friend advises you that he intends to make personnel management his life work. Outline a course of study that you think he should follow.

PART IV

PRODUCTION

MOTION PICTURE FILMS

FILMS FURNISHED FREE OF CHARGE

*Source: Singer Sewing Machine Company
Singer Building
New York, N. Y.*

- † Modern Industrial Methods (1 reel)—Cabinet making; mass production; tests of sewing machines.

*Source: General Electric Company
Visual Instruction Service
Schenectady, N. Y.*

- * 1. Yoke of the Past (3 reels)—Record of progress in agriculture.
* 2. The Molder (1 reel)—Gray-iron castings; mass production.

*Source: United States Department of Agriculture
Division of Motion Pictures
Washington, D. C.*

- * The Forest and Wealth (1 reel)—Forest's contribution to industry.

*Source: American Museum of Natural History
New York, N. Y.*

- * 1. Making An All-Steel Body (2 reels)—Preparing for pressing, stamping, welding.
† 2. Story of Copper (4 reels)—Mining, milling, smelting, and refining.
† 3. Petroleum, the Liquid Mineral (4 reels)—Producing and refining, distribution, and use.
† 4. Cotton, Civilization's Fabric (2 reels)—Field to mill; spinning and weaving.
† 5. Romance of Rayon (2 reels)—From trees to finished materials.
† 6. Story of Fabrication of Copper (2 reels)—Drawing of rods, rolling of sheets and testing.
* 7. Story of Steel (5 reels)—Mining (1); rails, rods, plates (1); wire (1); pipe (1); sheets and tin (1).

*Source: United States Bureau of Mines
Experiment Station
Pittsburgh, Pa.*

- * Making a V-Type Engine (2 reels)—Production of engines; Ford plant.

*Source: Linde Air Products Co.
205 E. 42nd St.
New York, N. Y.*

- † Oxywelding in Production (2 reels)—Production in autos, tanks, refrigerators, etc.

*Source: John C. Winston Company
1006 Arch St.
Philadelphia, Pa.*

- † Books—Manuscript to Classroom (1 reel)—Complete process of book publishing.

* Available in both 16 and 35 mm.

† Available only in 16 mm.

*Source: Hammermill Paper Co.
Advertising Department
Erie, Pa.*

† Voice of Business (2 reels)—Papermaking and processing.

*Source: Y.M.C.A.
Motion Picture Bureau
Chicago, Ill.*

- * 1. Story of Steel (5 reels)—Mining (1); rails, rods, plates (1); wire (1); pipe (1); sheets and tin (1).
- † 2. From Trees to Tribunes (3 reels)—The modern newspaper in production.
- * 3. Power (2 reels)—History of the use and types of power.
- * 4. The Eyes of Science (3 reels)—Manufacture of optical glass.
- * 5. Empires of Steel (3 reels)—Rolling, fabrication, and erection of steel for skyscrapers.
- * 6. Romance of Shoemaking (2 reels)—Process of shoemaking.
- * 7. Across America in Twenty Hours (2 reels)—Modern transportation, airplane design and construction.
- * 8. From Pigs to Paint (2 reels)—Dutch Boy White Lead.
- * 9. Cane Sugar (2 reels)—Growing and harvesting cane, manufacturing raw sugar, refining, packing, marketing, and transportation.
- * 10. The Story of Rubber (2 reels)—Crude rubber, manufacture into tires, and rubber goods.
- * 11. Within the Gates (2 reels)—Shirt making, from the raw cotton.
- * 12. From Seed to Cloth (2 reels)—History of the cotton industry.
- * 13. Arteries of Industry (4 reels)—Manufacture of wrought steel pipe.
- * 14. A Day with the Sun (3 reels)—Newspaper industry.
- * 15. Martex (1 reel)—Making of a Turkish towel.
- * 16. Magic of the Mountains (1 reel)—Cultivation, milling, and exporting coffee.
- * 17. From Mine to Consumer—The Story of Anaconda (2 reels)—Mining, smelting, refining, and fabrication of copper.
- * 18. From Mountain to Cement Sack (1 reel)—Manufacturers of Portland cement.
- * 19. Oil Tydings (4 reels)—Production, transportation, refining, and marketing of petroleum.
- * 20. The Manufacture of Anaconda Sheet Copper (2 reels)—Operations from rolling to inspection.
- * 21. The Romance of Rubber (2 reels)—Largest rubber plantation, America's part in production of crude rubber.

*Source: Goodyear Tire & Rubber Co.
Advertising Department
Akron, Ohio*

† Story of Goodyear (2 reels)—Making of tires.

*Source: McLarty Motion Picture Service
Certain-Teed Bldg.
Buffalo, N. Y.*

† Making the Noiseless Portable (2 reels)—Making typewriters.

* Available in both 16 and 35 mm.

† Available only in 16 mm.

RENTALS

*Source: Stark Films
209 W. Centre
Baltimore, Md.*

- * A Day with Esskay (2 reels)—Meat-packing plant.

*Source: Films of Commerce
Indianapolis, Ind.*

- * Dairy Products (1 reel)—Handling milk, manufacturing cheese and butter.

*Source: W. H. Dudley
Visual Education Service
736 S. Wabash Ave.
Chicago, Ill.*

- † 1. Iron Ore to Pig Iron (1 reel)—Mining, transportation and smelting; uses of steel.
† 2. Pig Iron to Steel (1 reel)—From mining process to finished product.
† 3. Rubber (1 reel)—As title indicates.

*Source: Edited Picture System, Inc.
Chicago, Ill.*

- † 1. The Shoe (1 reel)—Production from raw materials.
† 2. Rubber (1 reel)—From materials to finished product.
† 3. Wool (1 reel)—Shearing, packing and shipping wool; conversion.

*Source: Pinkney Film Service
1028 Forbes St.
Pittsburgh, Pa.*

- † Daily Paper (1 reel)—The business of publishing a newspaper.

*Source: Andlaner Film Co.
Ozark Bldg.
Kansas City, Mo.*

- † Lumbering in Pacific Northwest (2 reels)—As title indicates.

*Source: Y.M.C.A.
Motion Picture Bureau
Chicago, Ill.*

- † 1. Wisconsin Dairies (1 reel)—As title indicates.
† 2. Lumbering in Pacific Northwest (2 reels)—As title indicates.

* Available in both 16 and 35 mm.

† Available only in 16 mm.

CHAPTER XVII

PROBLEMS OF PRODUCTION

THE PRODUCTIVE PROCESS

Definition

As we observe the great number of material things from which we get some measure of satisfaction through use—the automobile, the paving bricks in the street, the clothes we wear, the food we eat, the chairs on which we sit, the books from which we study, the electric lights by which we read, the alarm clock by which we are so rudely awakened in the morning, the dishes from which we eat our breakfast, the trolley cars or busses on which we ride to work or school, and the countless other things to be seen on all sides that make our life generally more pleasant—we are struck by the fact that not a single one of these things was furnished by nature in the form and shape in which we now see and use it. Man has expended some energy on it. Almost without exception the material found in these goods has been modified in, one way or another by the application of either labor power alone or labor combined with tools or machinery.

For example, the steel frame of the automobile in which you ride reposed at one time in the earth as iron ore and was transformed into steel only after the application of mechanical and labor power. In turn, the steel was transformed into an automobile frame only after the application of additional machinery and labor. The same is true of the rubber and the cotton fabric in the tires, the glass in the windshield and windows, the wood in the floor of the car, the copper in the wires transmitting electricity, and each of the other automobile parts. All of these materials have been modified either by changing their form or by combining them with other materials, or both, to the end of increasing their usefulness to the consumer and of bringing profits to the persons making the modification. It is this process of modification and fabrication that we call production—the process of taking raw

material through all of the operations of a manufacturing establishment and reshaping it to such an extent and in such a way that it will have an increased capacity to satisfy the wants and needs of both industrial and ultimate consumers.

In order to guard against the reader's misunderstanding of terminology, it should be pointed out that the term *production* is used here in a more narrow sense than it is sometimes used. In general economics textbooks, for example, the term production is applied to any process, from the discovery of the raw material to the final delivery of the product into the hands of the final consumer, which gives increased capacity to satisfy human wants and desires. Thus, in the economic sense, transportation would be included as a part of the productive process, since it increases the capacity of a good to satisfy our wants by bringing it from a distant place into our own household where it can be consumed. Likewise, the merchant who keeps goods on his shelves until they are purchased is also considered to be a part of the productive machinery. He increases the capacity of a good to satisfy a human want by creating a time utility, i.e., by furnishing goods *when* they are wanted. In our discussion, however, production will have a much more limited meaning, applying only to those operations and processes through which material is taken from the time it reaches the factory as raw material, or as only partly finished goods, until the time when it is placed on the loading platform as finished goods ready to be shipped to all corners of the earth for consumption.

Types of Production

The student has doubtless observed that production situations differ. In some industries raw material is received in the plant and, after being subjected to a number of processes, finally appears as a finished product ready for shipment. These are called *continuous process* industries and may be further classified as *analytic* or *synthetic*. In the analytic type the single raw material, on its way through the plant, is divided and processed into a number of different finished products. A good example of the analytical continuous process is the meat-packing industry, where cattle are used as raw material and are processed not only into various cuts of meat, but also into glue, fertilizer, oleomargarine,

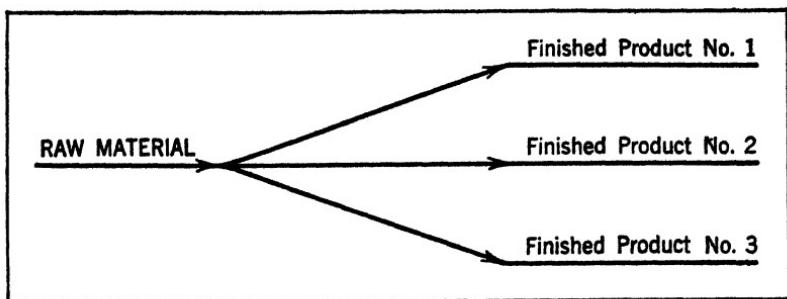


FIG. 29.—Analytical continuous industry.

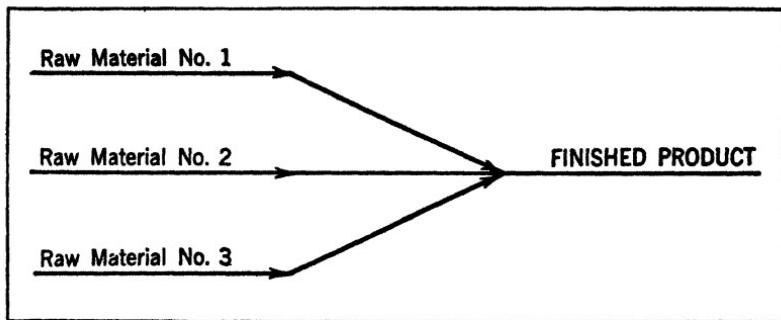


FIG. 30.—Synthetic continuous industry.

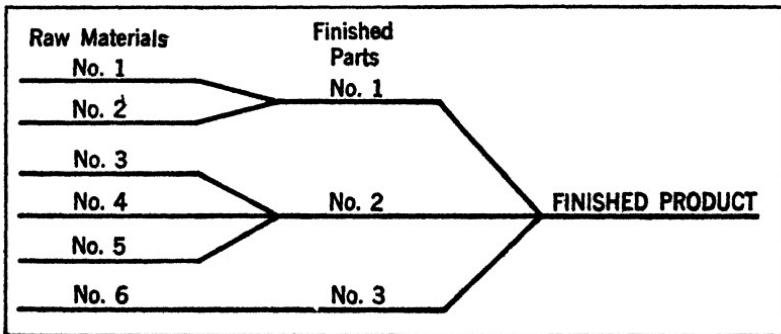


FIG. 31.—Intermittent process industry.

and medical supplies. The synthetic type, on the other hand, takes a number of different raw materials and combines them into a single finished product. The manufacture of steel, for example, requires three raw materials: coke, iron ore, and limestone.

Unlike the continuous process industry, the *intermittent* industry takes a number of raw materials and, after processing them into parts, stores the parts until they are assembled into a finished product. The manufacture of electrical equipment for automobiles is an example of this type.

While these classifications are convenient for the sake of discussion, it should be observed that most industrial plants are not exclusively continuous or intermittent. On the contrary, in most plants examples of both types can be seen.

Our definition of production will be more meaningful and the complexity of production problems will be more apparent if we examine the process of production in one of our more important industries—iron and steel.

PRODUCTION IN ONE INDUSTRY: STEEL¹

The manufacture of iron and steel products requires the congregation of coke, limestone, and iron ore. These materials are carefully proportioned and started toward the first step in the manufacturing process: the separation of iron from foreign matter. For this step a blast furnace is used—a towering structure, from fifty to one hundred feet in height and about twenty-five feet in diameter, constructed of steel and lined with a brick wall three or four feet thick. The raw materials are transported to the top by an elevator and dumped into a hopper from which they are fed into the furnace in alternate layers—coke, iron ore, and limestone. When the furnace charging is completed, a hot-air blast is forced through the material from the bottom to the top, raising the temperature as high as 3,500°. As a result the molten iron settles to the bottom of the furnace, leaving the slag or impurities to float on the top.

¹ For an excellent description of the operation of many industries, see J. G. Glover and W. B. Cornell, *The Development of American Industries* (Prentice-Hall, Inc., 1932). Much of the material in this section has been adapted from Chapter XVII of that book.

When a sufficient quantity of molten metal has collected in the bottom of the furnace, the clay tap is removed and the liquid metal is allowed to run into "pig" casting machines. Cooling water runs over these machines all along the route away from the furnace, and by the time they reach their destination the pigs are solid enough to dump. A variation of this practice is to draw the liquid iron off into containers known as *mixers*, where it rests in molten form until it starts on the second stage of its journey to the finished product.

Until relatively recent years the molten pigs were taken to the Bessemer converter for further refinement. This converter, invented by an Englishman, Henry Bessemer, was a barrel-shaped vessel about twenty feet high and fifteen feet in diameter, into which the molten metal was poured. Cold air was forced into the chamber, where a violent combustion took place. The oxygen combined with the impurities, leaving pure iron which was mixed with a high-grade carbon iron to make the steel.

Since the yield of the Bessemer converter was small, and for certain other technical reasons, the Bessemer has given way to the hearth process. The open-hearth furnace with an average capacity of a hundred and fifty tons is a rectangular structure built of brick and steel and measuring about fifteen by forty feet. The charging floor or hearth is on the upper level, over the brick heating or checker chambers. Into the furnace is first spread an even coating of dolomite (calcium magnesium carbonate) to prevent the heat from burning through the hearth floor. Then the huge charging machine, running on special tracks laid in front of the furnaces, passes before each furnace and deposits a carefully proportioned load of pig iron, lime, limestone, and other substances that promote the fusion of the minerals and metals. In some plants the molten iron is charged directly into the furnace from a ladle that has been filled from the mixer already mentioned. The furnace thus being charged, currents of air and gas are forced into the chamber and over the metal in alternate directions. The hot gases pass from the hearth through the checker chamber below on their way to ultimate escape through the stocks, thus making substantial fuel savings. At various stages of the heat, samples of the molten metal are taken to the chemist for

analysis. When he reports that sufficient impurities have been burned out, the furnace is ready to be tapped.

The clay plug is knocked out and the white-hot liquid steel surges out into waiting ladles. At this point an overhead crane picks up each ladle and transports it to a long line of ingot molds, into which the pourers allow the contents of the ladles to drain. The molds being filled, they are hauled out into the ingot yard to cool and await the next step in the process.

When the ingots have cooled sufficiently, another overhead crane comes along and lifts the molds from the ingots, which are about six feet high and twenty inches square. The ingots are then carried to the "soaking pit," where they are slowly and uniformly heated to a temperature high enough to allow them to be further processed.

The ingots are then taken to the blooming mills where they are rolled back and forth through machines built on the principle of a clothes wringer, until they assume the shape of a short thick slab, called a *bloom*. At that point the nature of the subsequent processing will depend upon the finished product desired. The blooms that are to be transformed into steel, tin, or galvanized sheets are taken through the bar mill, where they are rolled into long bars about eight inches wide and one inch thick, and thence to the sheet mill, where they are further rolled and processed into sheets of the desired size and quality.

If steel rails are desired, the blooms pass into the roughing mills, where they are further rolled into the approximate size and shape of the rails that they are to become. They are sent next to the finishing mills, where they are rolled into their final shape. After cooling and straightening they are ready for shipment and use.

Structural steel is processed in about the same way, but comes out in the form of I-beams which are shipped to the various finishing plants to be worked into shapes appropriate for use in buildings, bridges, and other large construction work. The blooms may be rolled and cut into billets that are reheated and further processed into pipes and steel rods. The rods in turn are drawn and made into bolts, rivets, chains, wire, nails, cables, fencing, and other products. Typically these processes take place in separate

plants, referred to as *pipe and tube mills, rod mills, wire and nail mills*, and so forth.

No description of the iron and steel industry would be complete without some mention of the by-products that present additional production problems. From the coke ovens coal gas is captured, washed, and sold. Other valuable by-products are ammonia, tar, and a high-grade fertilizer known as ammonium sulphate. The slag or impurities from the furnace is sold to manufacturers of concrete and cement.

Such, then, is a brief account of production in one industry—iron and steel. While superficial differences exist, the basic production problems are the same as those found in almost all other industries. Provision must be made for buildings and equipment; actual methods of production must be determined; standards of quantity and quality must be set; raw materials must be brought into the plant and routed through it; finished goods must be inspected, packed and made ready for shipment to customers. A detailed discussion of these specific problems of production must be deferred until Chapter XIX.

THE SIGNIFICANCE OF PRODUCTION ACTIVITIES

As one views the field of production in its broad setting, its importance and significance are suggested in many ways. In the first place, production represents the hub around which all other business revolves. The advertising and sales departments, the departments of personnel and finance exist as facilitating departments only. The employees of these departments are secure from unemployment only in so far as the production department maintains its own activity.

To the owners or the board of directors the production department has a somewhat different meaning, since it calls forth a tremendous outflow of funds for physical equipment, raw materials, power, salaries, and wages. In 1929, for example, the manufacturing industries of the United States paid out to the wage earners and foremen \$11,607,287,154.² In the same year they paid

² *Biennial Census of Manufactures*, United States Department of Commerce, Bureau of the Census, 1933, p. 21. The figure for 1933 was \$5,261,576,029.

out \$3,581,917,562³ as salaries to administrative employees (excluding officers of corporations) and clerical workers (except those working in central administrative offices); and they expended another \$38,177,900,046 for raw materials, containers, fuel, and purchased electric energy.⁴ For the 209,862 manufacturing establishments covered in the census of that year this represents an aggregate expenditure of \$53,367,104,762 for wages, salaries, raw material, containers, and fuel, or an average expenditure of almost \$255,000 for each establishment. While the use of the average figure can be criticized, the figure is sufficiently accurate to indicate the magnitude of production costs and their importance to a board of directors.

The social significance of production activities is extremely great. In 1929, before the disastrous effects of the depression were felt, the manufacturing industries furnished employment and income to 132,725 firm members and proprietors, 1,353,908 administrative employees (exclusive of corporation officers) and clerical workers, and 8,821,757 wage earners. To the wage earners and salaried employees manufacturing industries paid a total of \$15,189,204,716, which, in terms of purchasing power and living standards, is of tremendous importance.

The social significance of production activities is reflected in still another way. Improved production methods are followed by lower production costs, which, in most instances, are a necessary prerequisite to lower consumer prices and higher living standards. The constant development of new products adds greatly to the comfort of living. In short, most of the gains in American living standards can be traced to our remarkable improvements in the technique of production.

While there are more establishments engaged in the manufacture of food and kindred products in the United States than in any other industry, the textile industry employs a greater number of wage earners and pays out more in wages. The relative importance of the various industrial groups as indicated by the Bureau of Census may be seen in Table V.

³ *Ibid.* This was reduced to \$1,356,532,770 in 1933.

⁴ *Ibid.* The depression caused this figure to be reduced to \$16,820,821,977 in 1933.

TABLE V

STATISTICS OF AMERICAN MANUFACTURE, BY INDUSTRY, 1933*

Industry	Number of Establishments	Proprietors and Firm Members	Salaried Employees	Wage Earners	Salaries	Wages	Value of Products
Food and kindred products	40,285	25,126	98,144	666,237	\$ 151,279,858	\$ 620,557,720	\$ 6,604,036,429
Textiles and their products	19,265	10,812	82,970	1,474,325	136,885,137	1,017,300,860	4,811,237,757
Forest products	12,295	7,169	36,417	454,171	52,884,918	289,069,768	1,127,404,693
Paper and allied products	2,697	423	24,239	196,380	46,194,689	172,841,982	1,172,242,984
Printing, publishing and allied industries	19,395	10,775	137,275	264,106	266,805,328	355,625,374	1,733,437,479
Chemicals and allied products	6,529	1,347	48,229	237,480	90,768,648	220,771,146	2,117,513,188
Petroleum and coal products	1,211	63	31,175	110,453	57,069,542	144,648,744	1,871,493,835
Rubber products	408	79	14,874	106,283	26,323,098	99,116,552	472,743,587
Leather and its manufactures	3,265	1,417	10,951	282,000	31,583,525	222,487,448	996,772,988
Stone, clay, glass products	4,528	1,698	19,273	173,000	33,675,594	142,141,636	668,699,486
Iron, steel and their products (not including machinery)	5,133	1,190	63,376	554,108	111,916,890	500,379,049	2,463,000,843
Nonferrous metals and their products	4,919	2,287	27,997	188,271	46,001,355	166,721,547	1,068,753,411
Machinery (not including transportation equipment)	9,710	4,331	115,044	538,593	193,779,295	501,770,426	2,069,418,943
Transportation equipment	1,551	419	38,590	307,373	69,429,721	310,315,723	2,058,195,466
Railway repair shops	1,901	...	13,056	241,875	27,729,388	284,449,927	506,031,832
Miscellaneous industries	8,679	5,131	32,916	261,081	54,214,784	204,351,127	1,977,357,437
All industries	141,769	72,267	802,626	6,055,736	\$1,356,532,270	\$5,261,576,029	\$31,358,840,338

* Biennial Census of Manufactures, 1933, p. 21 et seq.

RELATIONSHIP OF THE DEPARTMENT OF PRODUCTION TO OTHER DEPARTMENTS

The discussion in this book is organized around the various branches of business activity, all of which are found in almost every business establishment. The functions making up these branches of activity are grouped in departments, usually designated as the departments of personnel, finance, marketing (which includes sales and advertising), and production. In order to get a somewhat clearer concept of what is involved in each of the phases of business activity each part of the book discusses the problems that confront the business executive in each of the departments, and each part treats the subject as if the various departments were separate and distinct, wholly apart from the others.

As has been indicated, there is a distinct advantage to be gained in this method of treatment. Through it the reader is able to see more clearly and completely the workings and problems of each department, but there is a disadvantage in such a treatment, a disadvantage arising from the danger of failure to see that, even though it is possible for the purpose of discussion to draw these lines of demarcation, the departments are, as a matter of fact, all parts of a co-ordinated whole. They are so intimately bound together in a unit working toward a common end that it is impossible to state exactly where the functions of one department end and the functions of another begin. Moreover, each group of functions, though departmentalized for the purpose of facilitating their operation, exercises an influence on every other group of functions.

The situation is very much the same in industrial enterprises as it is in sports. Each basketball team, for example, is made up of five men, each of whom has individual functions to perform; but as an organized group working toward a common end they must lose their identity and operate as a unit. The team will score not so much because its five players are skilled individually but because of the teamwork and co-ordination. Likewise, in industry results come not so much from the perfection of the

mechanics of a particular department as from the degree to which the several departments have been co-ordinated.

Let us stop then for a moment and examine the relationship existing between the production department and the other departments—finance, personnel, and marketing—to see how and to what extent each of these departments exercises an influence on the department of production. At the outset, we may get an idea of the position of the production department relative to the other departments by indicating that the department of production represents the *raison d'être* of business activity. In manufacturing industry, it is the center around which and for which the departments of marketing, finance, and personnel perform their functions. Production likewise provides the basis upon which such businesses as railroading, banking, and insurance are built. Without maintaining that the production department is the most important department in any business enterprise, we must concede, nevertheless, that it is the hub around which the activities of the other departments rotate.

Production and Finance

In approaching specific interdepartmental relationships it is logical that we first discuss the relationship between finance and production. It should be obvious that the success of the production department will depend, in part at least, upon the ability of the department of finance to purchase up-to-date machinery and equipment. Sound policies of financing enable the production manager to keep pace with current developments of science and with research. A sound financial structure affords adequate credit, making it possible to take advantage of exceptional opportunities to purchase raw materials and supplies. In short, the department of finance exercises a very great influence upon production costs.

The reverse relationships between finance and production should be no less obvious. The degree to which the production manager co-ordinates all production factors, the extent to which he eliminates waste of both men and materials, is immediately reflected in the financial statements through the cost records.

Production and Personnel

Equally influential upon the production department is the department of personnel—the department that enlists the labor supply, assigns workers to positions for which they are best suited, and develops and supervises the training programs for workers throughout the plant. The relationship here is most direct and apparent. Upon the success of the personnel manager in maintaining an adequate and well-trained labor supply will depend, in a great measure at least, both the character and magnitude of the production problems. Conversely, the difficulties of the personnel manager in securing employees, and more important, the difficulties of keeping them, will depend in part upon production methods and environment. If production methods are burdensome to the working force or if the productive environment endangers health and safety, the personnel manager will experience great difficulty in holding his men to their jobs.

Production and Sales

Since goods are produced in order that sales may be made, the sales manager is in constant touch with the production department and his influence upon production policies is great. To be sure, the production manager is, or should be, an expert in the development of sound manufacturing methods, and as such should be left reasonably free to work without interference. But the sales manager knows what the consuming public demands. His counsel is therefore of inestimable value to the production manager, whose technical expertness is without value except in so far as it results in goods that are in demand by the public.

The sales manager's influence upon production problems can be demonstrated in other ways. His salesmen on the road may be permitted to accept special orders for goods whose manufacture necessitates such a readjustment of normal production methods as to incur substantial financial losses. Or again, the sales manager may make no effort to spread sales throughout the year. He may even encourage seasonal buying. If so, the production department is worked far beyond capacity during one season—extra, high unit-cost workers are employed, obsolete equipment is pressed into use, floor space is overcrowded, and hours of work are so long as

to result in general labor fatigue—while during the succeeding period the production department remains idle. The result, of course, is increased difficulty in co-ordinating production activities, and greatly increased unit costs.

In fact, then, each of the major department heads, although in direct charge of a group of homogeneous activities, exercises a great influence upon the operation of each of the other departments. After the business is once set in motion, the functions of the sales manager are not only sales functions, but, less directly of course, production functions as well. Each department head is a businessman assigned to production, finance, personnel, or sales for administrative purposes only.

S U M M A R Y

Few of the articles that we consume are provided by nature in the form in which we use them. The raw materials from which they are made are modified or processed in such a way as to give them increased capacity to satisfy human wants. This modification process is called *production*. Production processes are either continuous or intermittent. Continuous production is either analytic or synthetic.

Production activities are important, not only as a fruitful source of income for investors, wage earners, and furnishers of raw materials, but as a means of providing a higher general standard of living.

Because this book is divided functionally—that is, finance, personnel, production, and marketing functions are discussed separately—it is necessary that we be reminded frequently of the interrelationship of departments. A business enterprise is an integrated whole and each function exercises an influence upon and is influenced by all other functions.

R E F E R E N C E S

- Books**
- DAVIS, R. C., *The Principles of Factory Organization and Management*, Chap. I.
- TUGWELL, R. G., MUNRO, THOMAS, and STRYKER, R. E., *American Economic Life* (Second Ed.), Chaps. 6, 7, 8.

Articles

FLYNN, JOHN T., "What This Country Needs," *Collier's*, Oct. 24, 1936, p. 12.

PROBLEMS

1. State your understanding of the distinction between *production* as used in this chapter and *production* as used in the broader economic sense.
2. List as many continuous process industries as you can. Which are analytic? Which synthetic? Can you think of any ways in which the production problems of one type of industry differ from those of another? What production problems are present in continuous industries that are absent in intermittent industries?
3. In Chapter II it was suggested that many very difficult business problems arise from external forces, that business problems are greatly colored by environment. Examine the section on the production of steel in this chapter and list problems that seem to arise from or that might arise from the influence of external forces.
4. Consult the *Biennial Census of Manufactures*, published by the Bureau of Census, and draw graphs that indicate the growth of production activities in the United States since 1880. Point out the changes that seem significant and indicate the reasons for their significance.
5. Using examples other than those found in the text, show how the departments of marketing, personnel, and finance influence the problems of the production department. How are they influenced by the production department?

CHAPTER XVIII

THE DEVELOPMENT OF PRODUCTION METHODS

PRIMITIVE PRODUCTION

If primitive craftsmen were to walk again upon our earth, they would doubtless be more impressed with changes in production methods than with any other phase of economic life. Their amazement would arise not only from the methods used in production but also from the great range of products now available to the most impecunious person. As they recalled their own industrial activity they would be no less struck by the place and tools of production. They might remember, first of all, that their productive efforts resulted in only the barest of necessities—a crude abode, coarse clothing, very simple items of diet, and a few household utensils. Further, they would doubtless recall that production was almost entirely by the hand of man assisted only by a few poorly fashioned hand tools.

These crude production methods were carried on by individual rather than by group enterprise. For example, the individual needing a new bow would discover and appropriate the sapling, shape and scrape it without the assistance or supervision of other persons. Primitive production was isolated, nonspecialized, and, of course, not standardized. Since all goods were produced without a plan, the bow made one day was different from the one constructed the next day.

HANDICRAFT PRODUCTION

With the passage of time two developments took place that greatly changed the character of production. First of all, tool-making was greatly facilitated by the discovery and extension of the use of iron, which was sufficiently malleable to permit many additional tools to be shaped, thus greatly expanding the possibilities of production. In the second place, the principle of labor spe-

cialization was extended so that each person devoted his working hours to a single line of productive activity. Instead of making all his own clothing, food, tools, and furniture, a worker would spend all of his time making shoes, for example, and would trade his surplus stock for clothing, food, and other necessary goods made by other specialists.

During the late Middle Ages production was associated with the development of the guild system, in which representatives of a particular craft or trade associated themselves for the purpose of preventing fraud, establishing production standards, and regulating conditions of work in their own craft. Usually the oldest son of a master craftsman inherited his membership in the guild; others were admitted only upon the payment of a sometimes very substantial initiation fee and upon the completion of a long term of apprenticeship.

Aside from the exceptions noted, production under the guild system did not differ greatly from primitive manufacturing. Usually, since the market area served was narrowly confined, the unit of production was very small, in most cases being limited to the operations of the master craftsman assisted by a worker who had completed his apprenticeship (called a *journeyman*) and, perhaps, by an apprentice. They worked in a small shop, usually one room of the master's home. Frequently the journeyman, and almost always the apprentice, made his home with the master, thus establishing a personal relationship that is rarely found in industry today. Each knew the problems of the other and all did the same work. Therefore the conflict that grows out of ignorance of one another's problems and diverse economic interests was not present.

As has been observed, simple division or specialization of labor was practiced, but its application was still in the embryonic stage. Each unit of production procured and transported its own raw material and delivered the finished product. Then, while there was specialization of labor by craft, there was little specialization of task. For example, the shoe master, journeyman, and apprentice each carried manufacture through all stages from raw material to finished shoes. There were not, as is common today, special assignments of tasks so that one person prepared the raw material for processing, another cut out the pattern, another built the uppers, still another put on the soles, and so on.

THE FACTORY SYSTEM

While certain superficial changes took place, these basic, manual, and small-scale methods of production prevailed generally until the time of the Industrial Revolution, usually dated at the middle of the eighteenth century. Two things can be said to have constituted the Industrial Revolution: first the invention of a great many machines,¹ and second the application of nonhuman power to production methods. The result we call the *factory system*. The factory system differed from preceding systems of production in very significant ways. First, since machines were too expensive to be purchased by any but a few persons of means, the working population had to be congregated in shops or factories for their work. Second, workers became wage earners. They no longer owned the raw material, the tools of production, or the finished product; instead, they worked on the employer's raw material and with his tools and machines for a wage. Third, by the application of steam, and later electricity, to the tools of production, productivity per worker was greatly increased. These radical changes, spreading rapidly, brought about what we commonly refer to as the *Industrial Revolution*. —

¹ A. Shadwell in his book, *The Engineering Industry and the Crisis of 1922* (1922), gives us some idea of the scope of invention during this period. Among others he lists (1) Watt's steam engine improvements, 1763-82; (2) Hargreaves's spinning jenny, 1764; (3) Cugnot's steam locomotive, 1769; (4) Crompton's spinning mule, 1769-75; (5) Blanchard and Magurier's velocipede, 1779; (6) Hornblower's compound steam engine, 1781; (7) Cartwright's power loom, 1785; (8) Nicholson's cylinder printing machine, 1790; (9) Saint's sewing machine design, 1790; (10) Street's explosive gas and oil engines design, 1791; (11) Metal lathes, 1794; (12) Bramah's hydraulic press, 1795; (13) Robert's papermaking machine, 1798; (14) Volta's electric current, 1799; (15) Medhurst's compressed air, 1800; (16) Symington's steamboat, 1802; (17) Murdoch's gas lighting, 1802; (18) Trevithick's steam locomotive on rails, 1804; (19) Jacquard's loom, 1804; (20) Woolf's compound steam engine, 1804; (21) Fulton's steamboat, 1807; (22) Heathcoat's lace-making machine, 1808; (23) common reaping machine, 1812; (24) König's printing machine, 1814; (25) Krupp's cast steel, 1815; (26) Ronald's electric telegraph, 1816; (27) Bell's reaping machine, 1826; (28) Fourneyron's water turbine, 1827; (29) Thimonnier's sewing machine, 1830.

CHARACTERISTICS OF MODERN PRODUCTION

Without reviewing industrial development from 1750 to the present, it will be sufficient to point out that modern production methods have their roots in the Industrial Revolution and that most of the changes since 1800 have been of degree rather than of kind. A more important task is to search out an answer to the question: What are the characteristics of modern production? In terms of manufacturing methods, what has been the net result of the years of industrial development since the Industrial Revolution? The answer is not a simple one. Modern production methods are extremely complex, and discussion will be facilitated by division into the following heads: (1) technology, (2) mechanization, (3) large-scale production, (4) specialization, (5) standardization, (6) combination, and (7) research.

Technology

It is frequently said that modern industry is *technological*, a statement which at once reveals the link between science and industry. It means that modern industry, particularly the production phase, is turning more and more to the physical and natural sciences for assistance in subduing the natural forces against which the production manager must work. It means that in almost every industry today there are to be found chemists, physicists, botanists, geologists, and other scientists working constantly in search of new means and methods, and new products and materials. The physical and natural sciences, then, can no longer be thought of solely as a field for the academic mind of the pure scientist because they are, instead, the practical tools of rigorous industrial enterprise. The achievements of the so-called captains of industry would have been scant indeed were it not for the contributions of men of science. Let us examine some of these contributions in an attempt to bring the link between science and production into clearer focus.

To transform raw material in such a way as to give it increased capacity to satisfy human wants, industry is dependent upon the science of chemistry at almost every turn. The chemist, in many instances, creates such entirely new products as the dyes made from coal tar. Quite as frequently he reduces the time re-



(Courtesy Newsphotos.)

Designs are placed on the drawing board for the engineer's criticism.

Automobile production begins in the minds of designers many months before the finished product appears on the market.

(Courtesy Newsphotos.)



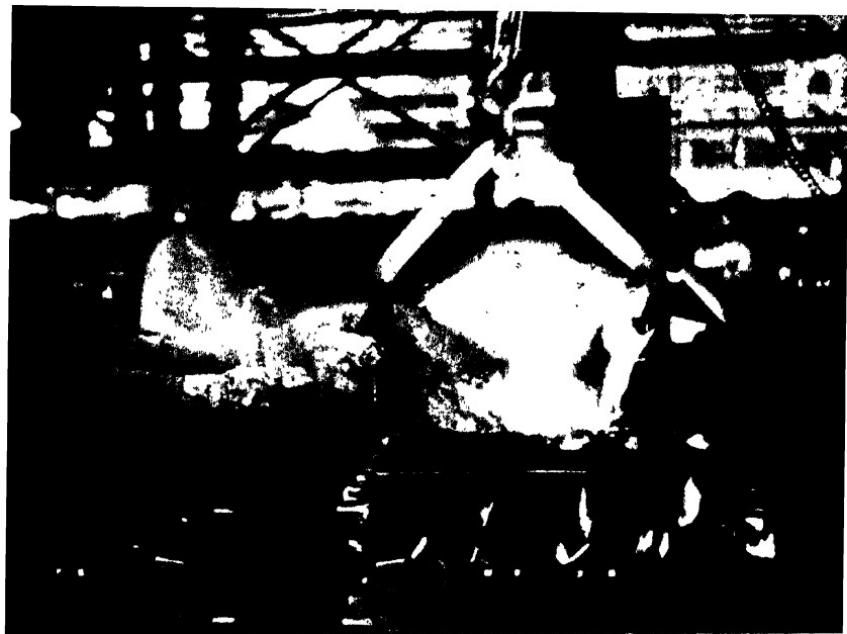


With the approved
model before him, the
color expert studies
color combinations.

(Courtesy Newsphotos.)

r each part are made in wood, and from these the metal dies are cast
Courtesy Newsphotos.)





(Courtesy Newsphotos.)

Pouring molten steel into motor castings.

Castings in storage, but insufficient for one day's production.

(Courtesy Newsphotos.)





(Courtesy Newsphotos.)

Giant presses stamp out brake bands without human assistance.

Steel strips pressed into wheels move along the conveyor to final production.

(Courtesy Newsphotos.)





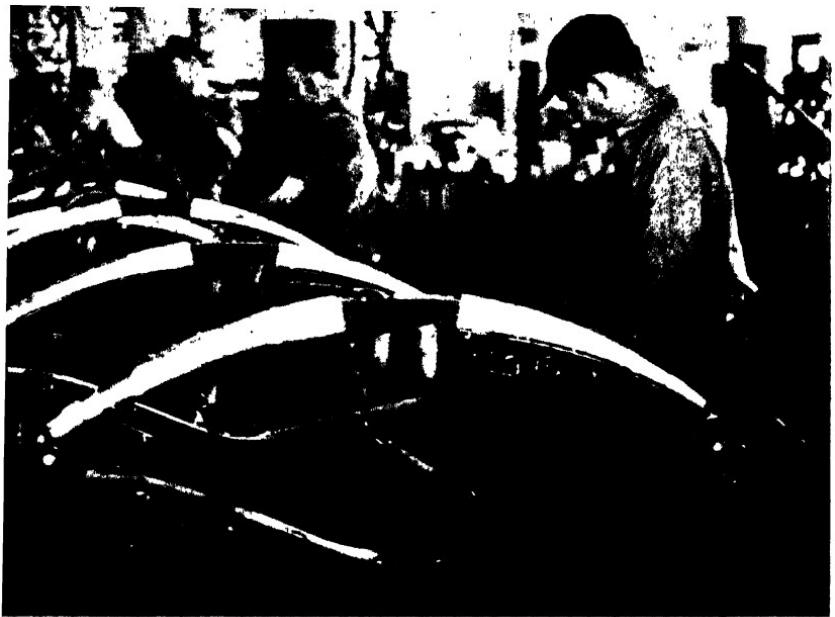
(Courtesy

Another press stamps out entire body to



(Courtesy Newsphotos.)

Body sides are stamped out of sheet steel.

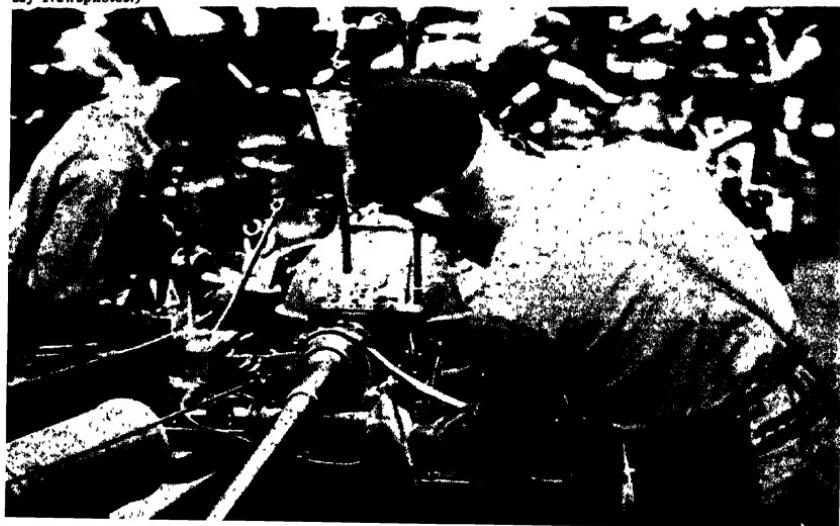


(Courtesy Newsphotos.)

Assembly starts; springs are attached to the chassis.

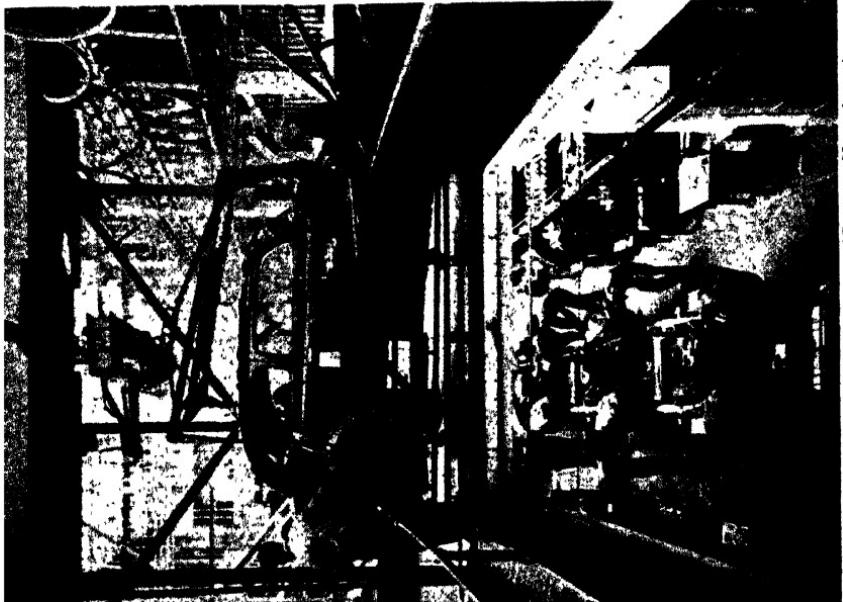
The motor is set into the frame.

(Courtesy Newsphotos.)

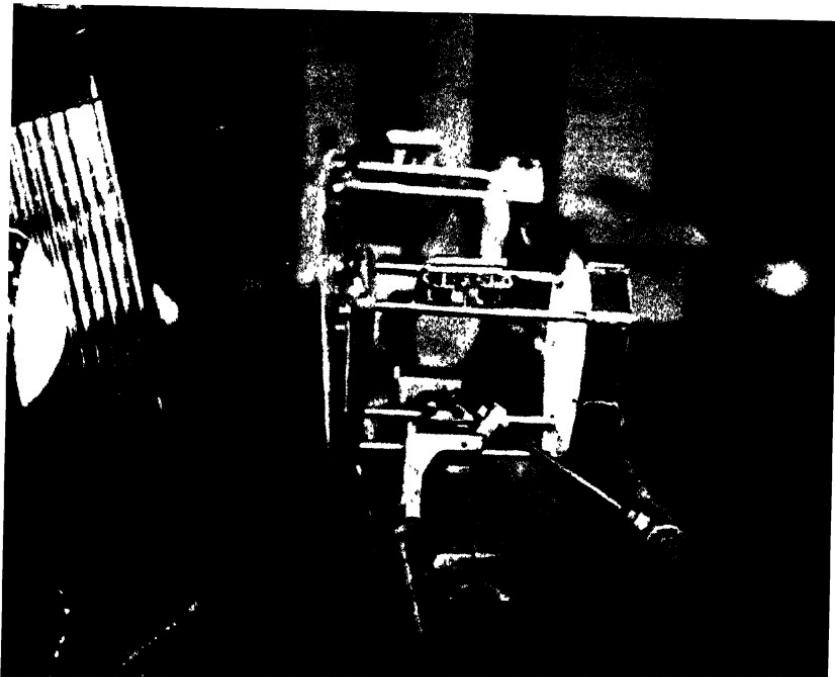




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(Courtesy Newsphotos.)

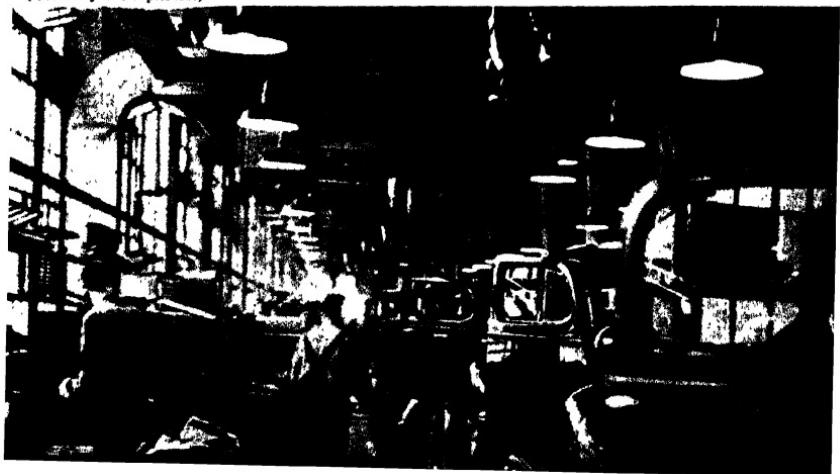


(Courtesy Newsphotos.)

Final inspection on headlight adjustment.

Car interiors are next completed.

(Courtesy Newsphotos.)



quired by natural processes. An example of this is the bleaching of cotton by chlorine instead of by the sun's rays. The magic of the industrial chemist is remarkable. A mere cataloguing of a few of the industrial accomplishments that result from chemical processes will give some idea of the role played by the chemist in industry: ink making, paper manufacture, textile bleaching, perfume production, leather tanning, production of artificial silk, glass making, dye production, battery manufacture, and steel production. Products developed by the industrial chemist in relatively recent years are celluloid, cellophane, powdered milk, aluminum products, stainless steel, lacquer, motion-picture film, carbon dioxide ice, and rubber tires. These examples can be multiplied by the student almost indefinitely.

The contributions of physics are equally noteworthy, as brief reflection upon the industrial importance of power will reveal. Before the development of steam as an agent of power, production was limited by the number and strength of human hands, and by the availability of water power, which put serious geographical limitations upon industry. The work of James Watt in 1769 increased greatly the production possibilities by multiplying the amount of power at the disposal of each worker and by freeing industry from the geographical limitations of a water supply. By 1869 the use of steam had given each worker control of 1.14 horsepower. Inefficiency of the piston, however, led physicists to undertake the development of a more satisfactory power agent—the turbine and the electric motor. By 1899, these developments had given the worker control of 1.9 horsepower. Such rapid strides have been made since that time that by 1927 the horsepower-worker ratio was 4.65 to 1. Today the ratio is around 5.5 to 1.

Aside from the production advantages of electric power in the quantitative sense, this contribution of physics has other merits. It can be transported over long distances with very little waste, and it is extremely convenient to use, being available at the turn of a switch and in units of any size desired.

The contributions of botany and zoology have been most significant in the field of food production and raw materials. The work of botanists in the development of drought- and disease-resistant crops has been notable. Their research has furthered the

development and cultivation of timber of proper weight, fiber, and elasticity—a contribution of inestimable value to many industries. The botanists are also responsible for the development of plants yielding large stocks of oils, resins, gums, and so on, which are of tremendous industrial importance.

No wonder, then, that modern industry has been called technological. The extent to which industry is dependent upon the technical expert in the various branches of the natural and physical sciences is truly remarkable. As we trace the growth and development of production methods in the following chapter, we shall examine other characteristics that give color and distinction to modern American industry.

Mechanization

Probably the most prominent characteristic of modern production is the use of machines. While most of our industries are called *manufacturing* (from the Latin word *manus*, meaning *hand*), they might more accurately be called *machine-factoring*, since the hand of the worker has become of secondary importance in production activity. In earlier days tools were propelled and guided by the worker's hands, as the carpenter now propels and guides his handsaw, but in modern industry, where machines are used for almost everything, the worker merely initiates the action of the machine by allowing the nonhuman power to run through the mechanism. Whereas in former systems of production the tool supplemented the worker; today the worker supplements the machine.

While there has been a great deal of sentiment against the widespread introduction of machinery—largely on the grounds that it results in the decay of the skilled crafts and robs the worker of any spiritual satisfaction from plying his skill—machine production has many advantages over hand production. In the first place, as one can see from a glance at Table VI, the use of machines results in a tremendous increase in quantity of goods produced. This increase, in turn, is to be explained by two characteristics of the machine—speed and tirelessness. Compare, for example, the output of a worker using a handsaw with one directing a power-driven circular saw. Due to increased speed, a cord of wood can

be cut in perhaps one-sixth of the time necessary if a handsaw were used. And the mechanical saw can work eight, nine, or ten hours without a minute's rest. It is inexhaustible and tireless.

TABLE VI

INDEX OF PRODUCT, WAGE EARNERS AND POPULATION *

Year	Population	Wage Earners	Product (Quantity)	Product per Wage Earner
1899	100	100	100	100
1904	110	114	122	107
1909	121	137	159	116
1914	131	146	170	116
1919	140	191	214	112
1923	149	186	263	141
1927	158	177	274	155
1929	162	188	311	165
1931	166	139	206	148
1933	168	129	191	148

* *Biennial Census of Manufactures, 1933, p. 17.*

Illustrations will make the point clearer. In the glass bottle industry before the widespread introduction of machines four skilled craftsmen and four helpers could produce 3.75 gross of four-ounce prescription ovals per hour. In 1925 an automatic machine, tended by one man, produced on the average of 69.75 gross per hour. In the manufacture of eight-ounce table tumblers three skilled craftsmen with six helpers could produce approximately 279 pieces per hour or 31 pieces per hour per man as compared with 380 pieces per hour per man produced with up-to-date automatic machinery. In light-bulb production three workers in a hand shop produce about 54 pieces per man per hour. The introduction of new automatic machinery resulted in an output of 1,704 pieces per man per hour. The possibility of concentrating tremendous power in small areas accounts in another way for the increased productivity of machines. Observation of the steam shovel in operation, the riveting machine, and the powerful punch

press as it cuts uniform pieces from a half inch of steel will give adequate support to this statement.²

In the second place, machine production results in a product of improved quality, due to the accuracy and precision of the machine process. With the refined adjustments possible on modern machinery, operations can be performed that, in terms of delicacy, precision, and uniformity cannot be approached by the hand method. Recollection of the fact that there are many manufacturing operations where the allowable error in measurement cannot exceed $\frac{1}{25,000}$ of an inch gives meaning to the observation. In this connection also it should be noted that a uniformity of product results from the precision of machine production that cannot be attained when human hands guide and direct the tools of production. If you have had to replace worn or broken parts in a watch, automobile, or typewriter, and will recall the ease with which you secured them, you will appreciate the advantage of uniformity. Uniformity resulting from machine production also makes it simpler for the production manager to predict and control production costs, something very difficult to do under hand methods.

In the third place, machines have the advantage of self-regulation. Regardless of how thoroughly habituated a worker may become, his production methods need almost constant examination and supervision. A machine, on the other hand, after being adjusted to operate in a certain way and at a certain speed, can be depended upon to produce with a minimum of required attention and supervision.

As we list these advantages of machine production, it should be evident that they combine to give one major advantage: lower production costs through savings in both raw material and human labor.

However real these advantages, it is not possible to ignore certain grave problems that arise from increased mechanization. In the first place, overhead costs have increased greatly. With the great increase in the amount invested in capital equipment—machines, internal conveyor systems, cranes, and the like—such constant costs as depreciation, insurance, and interest mount rapidly. This results, in turn, in greater sensitivity to loss from busi-

² *Monthly Labor Review*, April, 1927, p. 1.

ness fluctuations, and a more intense struggle between competitors for business of sufficient volume to keep unit overhead costs at a minimum. Intense competition leads not only to business combination and monopoly conditions, but also, in some fields of business, to price cutting, "high-pressure" salesmanship, unethical advertising, and racketeering.

A second problem resulting from increased mechanization is technological unemployment—unemployment resulting from the substitution of mechanical for human labor power. Workers who have spent years in the development of a skill suddenly find that a machine has been invented that can do their work more quickly and economically than they can. Thus displaced they go in search of new employment. When they find employment at all they discover in most instances that they must work at reduced wages.

It may be, as some assert, that there is no such thing as permanent technological unemployment—that technologically displaced workers are absorbed in industry in the due course of time. But little comfort can be gained from this. A more significant point is that while some workers are being absorbed, our dynamic society is developing new machines that displace others. In other words, the problem of technological improvement is not so much the permanent displacement of any one worker as it is the permanent existence of an unemployed group.

Large-Scale Production

Another characteristic of modern production is found in the development of large-scale production methods. Examination of Table VII will indicate this trend. While there has been a relatively small increase in the number of manufacturing establishments from 1850 to the present time, the increase in the number of wage earners employed and the value of goods produced has been tremendous. In 1849, 123,025 manufacturing establishments employed 957,059 wage earners and produced goods valued at \$1,019,106,616. In 1933, the number of establishments had increased only to 141,769, but they employed 6,055,736 wage earners and produced goods valued at \$31,358,840,338. The value added by manufacture during the same time period increased from \$463,982,734 to \$14,538,018,361.

TABLE VII

GROWTH OF MANUFACTURES, 1849-1933 *

Year	Number of Establishments	Wage Earners (Average for Year)	Value of Products	Value Added by Manufacture
1849 †	123,025	957,059	\$ 1,019,106,616	\$ 463,982,734
1869 †	207,514	4,712,763	11,406,926,701	4,831,075,210
1904 †	216,180	5,468,382	14,793,902,563	6,293,694,753
1909 †	268,491	6,615,046	20,672,051,870	8,529,260,992
1914 †	272,518	7,023,685	24,216,514,573	9,857,579,559
1919 ‡	213,631	8,980,536	61,737,125,332	24,748,249,340
1923 ‡	195,580	8,768,491	60,258,470,607	25,777,616,310
1927 ‡	190,938	8,334,184	62,278,116,181	27,475,522,573
1929 ‡	209,862	8,821,557	69,960,909,712	31,783,009,666
1931 ‡	174,255	6,506,701	41,038,402,307	19,357,642,706
1933 ‡	141,769	6,055,736	31,358,840,338	14,538,018,361

* Biennial Census of Manufactures, 1933, pp. 18-19.

† Establishments having products valued at \$500.00 or more.

‡ Establishments having products valued at \$5,000.00 or more.

From this we see that between 1849 and 1933 more wage earners and more capital equipment have been brought together under a single management in the average establishment—that the typical manufacturing unit produces on an increasingly large scale. An example from a single industry will clarify the point. In 1900, there were 28,014 manufacturing establishments employing 191,043 workers in the men's clothing industry—about seven workers per plant. By 1925, however, the number of establishments had decreased to 4,000 and the number of workers to 174,332, but the average plant employed approximately 43 workers.⁸

There are, to be sure, a number of important advantages that arise from this development.⁴ With the increased amount of raw material and supplies utilized by each establishment, more favorable terms of purchase can be obtained. The principle of labor specialization can be more completely applied where larger num-

⁸ Report of the Committee on Recent Economic Changes, *Recent Economic Changes in the United States* (McGraw-Hill Book Company, Inc., 1929), p. 84.

⁴ For a more complete treatment of this, see R. T. Bye, *Principles of Economics* (3rd ed., F. S. Crofts & Co., 1933), p. 154 *et seq.*

bers of workers are involved. With the increased financial resources found in larger esatblishments, management can take advantage of improved technical knowledge and can install up-to-date low-cost machinery. In some industries, such as meat packing and steel production, incidental products, formerly discarded as waste, can be transformed profitably into useful by-products. In many instances it is also possible, under large-scale production conditions, to devote a substantial amount of money to experimentation and research in new and improved methods and products.

* These are the advantages which flow out of the economies of large-scale production, but realization of these economies imposes upon management a number of problems not usually found in small-scale enterprises. The problem of supervising and directing a large number of employees is greatly complicated. Much greater care must be exercised in routing raw material and partly finished goods through the proper manufacturing channels. The budgeting of machine time—the task of providing adequate work for all machines at all times and still of preventing machines from being overloaded with work assignments at any time—becomes a problem of major importance. In short, large-scale production greatly increases the administrative task of seeing that men, material, and machines are at the proper place at the proper time.

Specialization

Probably the most apparent difference between modern production methods and those in vogue a hundred years ago is in the degree of specialization. The application of the principle of specialization involves the restriction or narrowing of the range of functions performed by an economic agent. Moreover, while specialization of labor has received most attention from economists, the principle has been applied with equally great success to manufacturing processes, plants, and equipment. The advantages, disadvantages, and economic significance of the principle as applied to some of the phases of industrial activity will be dealt with in some detail in the following sections.

Labor Specialization.—In the days before the Industrial Revolution the head of each family produced everything con-

sumed by this group during the course of a year—the house, food, clothing, agricultural implements, instruments of war, and so on. The family, therefore, constituted a complete economic unit. Under modern conditions, however, each person produces very few of the goods and services he consumes. Instead, he concentrates his energy upon the production of one item, such as bread, bricks, or brass, and exchanges his surplus through the medium of money for his other requirements made by other specialists. This we call *labor specialization*, or *simple division of labor*.

Modern manufacturing, however, has developed specialization much further. In most instances each field of production has been divided and subdivided into a great number of minute tasks—each performed by a person who spends all of his time and energy at this single task. This is called *complex division of labor* or *specialization of tasks*, and is the type of labor specialization in which we are interested in this section.

An example, the meat-packing industry, will clarify the concept. One man drives the animals into the killing pen. Another kills the animal with a blow on the head, still another puts the animal on an overhead conveyor, which carries it along through a series of operations, each performed by a single worker. One removes the hide, another dresses, still another washes. Additional specialists divide the animal into its various cuts, others pack, store, and make ready for shipment to meat dealers. The operations formerly performed by one worker are now divided among many specialists, each of whom spends his entire working time repeating the performance of a single minute task.

Extensive development of task specialization has resulted in certain advantages. Less skill is necessary for specialized operation, which of course means that less difficulty is encountered in recruiting a satisfactory labor force. Since less worker training is necessary, a shorter time elapses between the time of hiring and the attainment of maximum working efficiency by the worker. In turn, since the workers become highly skilled, each in his individual task, the quality of the output is improved, and uniformity of product is assured. With the increased speed of operation coming from specialization, increased output results in lower costs per unit of labor, per machine, and per unit of floor space.

Finally, this lower over-all unit cost makes lower prices possible.

If these advantages accrue, why is not complex division of labor practiced universally? The answer to this question is that certain conditions must obtain in an industry before labor can be specialized to a high degree. It is necessary that there be a sufficient amount of work to keep all workers engaged during the working hours. Both the process and the raw material worked upon must be uniform. There must be a steady supply of labor and a highly standardized program of labor training. It is essential that there be no violent seasonal fluctuations in either the demand for the product or the supply of raw materials. And finally, the process must not be susceptible to "bottle-neck" operations. That is to say, the work must flow smoothly and evenly through the entire process, without an accumulation of work at any one stage that will interrupt the work of successive operations.

Specialization of Process.—As has been pointed out, the principle of specialization is applicable in a field far wider than labor alone. It applies with equal success to industrial processes. Take patent medicine manufacture for an example. A company manufactures four products: "Peptone," a liquid tonic; "Ulgo," a liquid stomach remedy; "Natune," a stomach remedy in tablet form; and a cough drop. Before specializing its processes the company manufactured any one of the four products whenever the orders made it necessary. At times during the course of a single week a quantity of "Peptone" would be made up, then a supply of cough drops, and then, because of new orders, an additional lot of "Peptone." Sometimes it became necessary to arrange the productive apparatus for the same product four or five times during a single month. It should be obvious that such an arrangement resulted in much wasted time and effort. Both machines and men were frequently idle during the times that the process was being changed and raw materials were being prepared. Further, because of delays occasioned by this situation—delays in securing raw materials quickly; delays awaiting machinery in use on the previous job—orders were not always promptly filled and were sometimes canceled.

To correct this the company introduced a specialized process. From the demand experience of many years the executives deter-

mined the amount of each product necessary for three months' orders. Then they procured the proper raw material and set up the apparatus for, say, Nature and manufactured an amount sufficient for three months' orders. In this way no product was processed more than once in three months, but during the manufacture of Nature the workmen and management were free from the interruptions that they had under the former system.

There are, of course, some disadvantages that result from specialization of process. It is necessary to sacrifice some degree of flexibility. The finished product inventory is increased considerably, and there is always the danger that a reduction in demand will leave a part of the stock unsold. These risks, however, can be minimized with careful planning, and there are sufficient advantages in process specialization to compensate for the disadvantages. Less idle machinery and labor reduce both overhead and labor unit costs. A more scientific purchasing policy can be inaugurated. The goods produced are more uniform in quality. Finally, specialized process admits greater specialization of labor.

Specialization of Equipment.—Machinery and equipment in general use throughout the manufacturing world can be roughly classified as *standard* and as *special*. Standard equipment is that which can be adapted to more than one process—that is, it can be used for more than one purpose. Special equipment, on the other hand, is so constructed that it can be used for a single process only. For example, it is possible to secure either standard or special lathes and punch presses. The standard lathe is capable of being adjusted to process many different sizes and types of material, while the special lathe does not admit of adjustments. It will accommodate one size and type of material only. Likewise the standard punch press is sufficiently flexible to allow for adjustment in both size and shape of the areas in the steel or bar to be punched out, while a special punch press cannot be adjusted.

Since special equipment is constructed with a particular purpose in mind, it turns out a higher quality of product at a lower unit cost. With increased output and the possibility of greater labor specialization, lower labor unit costs follow. However, before an enterprise can install a large amount of specialized machinery and equipment it must have a sufficient volume of business

to keep the equipment in operation. The initial cost, maintenance and repair costs, and operation costs are higher for specialized than for standard equipment. In some cases, too, highly specialized machines, shoe machines, for example, are not sold but leased at a very high cost. Moreover, since the resale value of special machinery is low, a company must be assured of sufficient business to allow the machine to pay for itself. Otherwise the purchase of standard equipment is advisable. In sum, special equipment results in lower unit costs, but incurs a great many financial risks not incident to the use of standard machines and equipment.

It should be observed that what has been said of special equipment is equally true of specialized plants and buildings.

Standardization

The term *standardization* refers to uniformity and implies the determination of a criterion of excellence to be copied without exception—criteria of products, of process, and of work behavior. The idea of standardization was applied first in industry by Eli Whitney, who in 1807 announced his now-famous principle of *interchangeable mechanism*. Realizing the difficulty of replacing broken and worn parts on firearms, with the consequent necessity of discarding the old in its entirety and purchasing a new one, Whitney recommended the creation of certain standard sizes, weights, and qualities for all gun parts. The parts thus standardized could be manufactured for stock and ordered by number. The advantage to consumers was tremendous. The business advantages will be discussed presently.

Following the precedent established by Whitney a hundred years before, the Conservation Division of the War Industries Board in 1917 undertook to promote a co-operative movement among manufacturers in the direction of standardization and simplified products—an undertaking that resulted from a realization of the economic wastes of excessive diversification of products. Recognizing that there could be no practical necessity for a hundred different colors in men's hats, seventeen hundred different rear tractor gearings, five or six thousand types of pocket knives, sixty-five paving brick sizes, and so on, they called meetings of business executives to discuss the problem of reducing the number of models of goods to a relatively small number of standard

sizes, shapes, and qualities. After the World War the Division of Simplified Practice of the Department of Commerce was created to continue the work started by the War Industries Board. Equally important work along the same line has been done by the American Standards Association.

From this time forward there has been a steady growth of standardization in industry until it has become one of the most prominent characteristics of modern production technique. Moreover, the principle of standardization has been applied not only to products but to processes, equipment, and labor methods as well. The advantages of product standardization are many. Perhaps the most important advantage is to be found in the increased opportunity to utilize the principle of specialization. Where highly standardized goods are produced, labor as well as plant and equipment can be specialized. Reference to the section on specialization will refresh the memory as to the desirability of greater specialization. A second advantage flows from a simplification of purchasing and storage problems. Large purchases are possible and long-time purchase contracts can be used. In the third place, inspection problems are fewer and costs are consequently lower. Finally, increased volume of production is possible. The net result of these advantages is, of course, lower unit cost.

Despite these advantages, however, the spirit of competition and the will to offer a large variety of products to the consuming public has been a serious obstacle to further expansion of standardization programs. Variety has also played a very important part. Since ways of doing a given job vary greatly from worker to worker unless a standard method is taught and enforced, standardization as applied to labor is of very great importance in modern production. This was early recognized by Frederick Winslow Taylor, the father of scientific management. It was Taylor's contention that the work methods of each job should be analyzed very carefully, waste motions eliminated, and model practices defined for each job. Nor did he stop here. "The adoption and maintenance of standard tools, fixtures, and appliances down to the smallest item throughout the works and office, as well as the adoption of standard methods of doing all operations which are repeated, is a matter of importance, so that under similar conditions the same appliances and methods shall be used throughout

the plant. This is an absolutely necessary preliminary to success in assigning daily tasks which are fair and which can be carried out with certainty.”⁵

The fullest use of labor standardization necessitates the determination of the best methods, provision of standard working conditions, standard tools, and uniform raw material. Moreover, the creation of these conditions requires time and money. Time-and-motion-study⁶ men must be hired, and a program of experimentation with tools and raw material introduced. The results, however, warrant the expense. Employee earnings are increased and labor unit-cost is decreased. Supervision and inspection problems are simplified, and both quality and uniformity of product are improved. Finally, it becomes relatively simple to develop a worker-training program that will bring the worker to maximum production efficiency in a very short time.

Combination

One of the most interesting characteristics of modern production industry is the tendency toward combination—the concentration in one organization and under one management of functions usually performed by two or more independent enterprises. This is sometimes referred to as *consolidation* or *aggregation of industry*. Whatever the name, it refers to an attempt to utilize more completely the plant, equipment, and labor force by combining the business of a number of firms under a single management.

Three types of combination may be distinguished. *Horizontal* combination is the consolidation under one management of a number of enterprises operating in the same stage of the production process. Probably the example that occurs to most readers first is the chain store organization, such as the J. C. Penney Company and the Great Atlantic and Pacific Tea Company, both selling goods through hundreds of retail outlets all over the country. While the General Motors Corporation is also an example of vertical combination, it illustrates horizontal combination very well—manufacturing and assembling Chevrolets, Pontiacs, Oldsmobiles, Buicks, and others.

⁵ F. W. Taylor, *Shop Management* (Harper & Brothers, 1911), p. 116.

⁶ See section in following chapter, p. 355.

Vertical combination or integration is the combination under one management of all the production stages from raw material to finished product. Perhaps the best example of this type of combination is found in the far-flung activities of the United States Steel Corporation. It owns great ore deposits, coal mines, transportation facilities, blast furnaces, sheet and rod mills, and so on. It is an almost completely independent organization.

Circular combination is the combination under one management of a single stage of production of two or more goods unrelated in use but closely related as to raw material, labor, and manufacturing processes. Referring again to the cases reported by Robbins and Folts, we find an example of a corporation manufacturing oil-burning equipment and refrigeration units.⁷ Unlike as to use, the products are quite similar as to raw material, process, and labor requirements.

There are a number of reasons for the development of horizontal and circular combination as a characteristic trend in modern industry. As has been suggested, a primary aim has been the more complete utilization of plant, equipment, and labor force. This is particularly true of industries subject to seasonal fluctuations and which during "off seasons" have watched their costs mount greatly due to idle plants and equipment. By the addition, however, of related products or by the acquisition of other production units in the same business the problem of unused plant capacity may be partially solved. Another reason for the development of combination has been the desire to reap the benefits of large-scale production—more favorable terms of purchase, more effective use of machinery, utilization of by-products, and more elaborate research programs. In addition to these advantages is the greatly increased opportunity for specialization and standardization of labor, equipment, and process.

In early years vertical combination resulted from an attempt to gain economic independence. Having experienced difficulty in getting raw material, supplies, and partly finished goods necessary for manufacture, many businesses acquired their own sources, and thus established virtually complete control over the quality, quantity, and price of those things used in the manufacture of the

⁷ *Industrial Management*, pp. 207 et seq.

finished goods. With the development of specialists in auxiliary fields and consequent ease of securing raw material and other supplies, the necessity of economic independence was greatly reduced, but vertical combination continues for the benefit of large-scale ownership.

The dangers of combination are largely social in character. The larger a business becomes, the closer it approaches monopolistic power. In its zeal for increased profits and in its desire to avoid the "wastes of competition," the big business may continue to absorb its competitors until the benefits of competition are no longer felt. Spontaneous adjustment of supply, demand, and price becomes no longer possible, and society as a whole suffers in terms of the quality of service received and the price paid for the products.⁸

Research

One of the most encouraging developments in modern industry has been the establishment of systematic research programs over a large part of the industrial field. Available studies⁹ indicate that most of the firms studied carried on research as a company activity while a large number of others were either supporting co-operative research activities or maintaining testing laboratories. Still others contemplated installation of some sort of research in the near future.

Of those conducting research programs as a company activity, many maintain elaborate laboratories and staffs of engineers, chemists, and physicists costing thousands of dollars a year. In the study referred to, each of 208 companies is reported to have spent an average of \$57,652 a year. Most of these spent less than \$50,000 a year but the twenty-five or thirty spending over \$100,000 yearly increased the average disproportionately. It should be noted that almost 60 per cent of the firms reported that research expenditures were increasing year by year.

Those firms that engage in co-operative research do so largely through trade associations, engineering societies, universities, and endowed fellowships. Research programs cover a wide range of activities and are not confined to the field of production. The

⁸ See chapter on government and business, p. 641.

⁹ See *Recent Economic Changes in the United States*, pp. 106 et seq.

programs may be roughly classified under four broad headings: (1) new and improved products research, (2) manufacturing process research, (3) waste elimination research, and (4) research into market areas and conditions. Of these only two, manufacturing process and waste elimination, need concern us here.

Research into manufacturing process involves experimentation with and development of new machines and tools, new methods of handling material and transporting it from one stage of the manufacturing process to another, and the study of worker methods with an eye to eliminating excess time and motions. For example, a large Connecticut chemical engineering corporation builds equipment for the manufacture of rayon. In an effort to perfect this equipment further the company maintains an experimental rayon plant in which rayon is actually manufactured, and in which processes are studied by engineers and chemists who are trained as operators. The research department of another manufacturer, more interested in reducing internal handling costs, succeeded in reducing the number of operations from thirty-one to twenty-seven and the number of feet traveled by materials from 7,547 to 1,058, a reduction of 6,489 feet.¹⁰

Waste elimination research also involves, of course, experimentation into methods of processing material so as to increase utilization, but more importantly it deals with the development of uses for by-products. A Rhode Island chemical plant had a great deal of calcium sulphate waste from the production of phosphoric acid. Its great bulk made storage costly and hauling away for fills even more so. After the chemists were assigned to the task, the problem was solved by the discovery that excellent plaster building blocks could be produced and sold at a substantial profit. A radio-manufacturing enterprise discovered a profitable use for three-inch wire lengths that had before been discarded as waste. To realize that by-products are quite as important financially to meat-packing companies as are the main products is to recognize their value for other industries.

While a great many firms do not keep records of research expenditures, most of them claim to be convinced of the value of research. To quote from the volume on *Recent Economic Changes*: "As to the ratio of profit to the amount expended, nu-

¹⁰ See Fig. 32.



(Courtesy Goodyear Tire and Rubber Co.)

Fabric weaving room. Note absence of operators.

Many industrial improvements come from chemical research. This is one of many thousands of research laboratories in modern industry.

(Courtesy Goodyear Tire and Rubber Co.)





(Courtesy Carnegie-Illinois Steel Corp.)

Hot-rolling steel slabs.

Hot-sawing steel rails.

(Courtesy Carnegie-Illinois Steel Corp.)



merous estimates range from 100 to 300 per cent. One firm reported profit at '1,000 to 1.'"¹¹ In any event, the development of research has been sufficiently broad and the rewards have been sufficiently great to assure its continuation.

S U M M A R Y

Before the Industrial Revolution production activities were extremely simple, being carried on, for the most part, in very small shops adjoining the craftsman's living quarters. The typical production unit employed no more than two or three workers, each carrying through the manufacture of an article from raw material to finished product. All work was done by hand, assisted by crude tools. With the general development incident to the Industrial Revolution startling changes occurred which, during the past hundred years, have transformed manufacturing completely. Modern manufacture is characterized by large-scale production and by a very high degree of mechanization. Handwork is now the exception rather than the rule. Labor, processes, plants, and equipment have been specialized far beyond the recognition of early nineteenth-century craftsmen; products, manufacturing methods, and work behavior have been standardized to a surprising degree. Combination in industry is apparent on every hand, and hundreds of thousands of dollars are spent annually on research programs.

Having completed the picture of the broad characteristics of modern production, our next task is to examine in detail some of the current production principles and practice.

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¹¹ *Recent Economic Changes in the United States*, p. 111.

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BORTH, CHRISTY, "Americana: On the Line," *Reader's Digest*, July, 1937, p. 15.

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PROBLEMS

1. List the difference between production problems of ancient Rome and modern America. Would your list have been different had you used fifteenth-century England instead of ancient Rome?

2. What are the chief characteristics of the factory system? What effect does each of these characteristics have on production problems? On personnel problems?

3. It is commonly said that the Industrial Revolution started in the last half of the eighteenth century. When did it end?

4. List the results of the Industrial Revolution, being careful to distinguish between social and economic results. Are these results of greater or less importance today than they were in the year 1825?

5. Prepare a tabular form putting in the left-hand vertical column (a) mechanization, (b) large-scale production, (c) specialization, (d) standardization, (e) integration, and (f) research. Across the top in the horizontal column put the following headings: (a) meaning, (b) effect on production, (c) effect on personnel problems, (d) effect on marketing problems, (e) effect on finance, and (f) social effects. Fill in each space as briefly and concisely as you can.

6. What relationship do you see between the headings in your vertical column and the problem of overhead costs?

7. Frequently one hears it said that mechanization and specialization are having an unfortunate effect upon the intellectual life of the nation. What evidence is there in support of this statement? Do you agree?

8. Carefully observe your surroundings in the classroom. Prepare a list of things in your environment that result from the application of science to industry.

9. "Modern industry is technological." What does this statement mean to you?

10. If you were asked to prepare a course of study for students of business and industry, what natural sciences, if any, would you include? Why? Are you taking these courses?

CHAPTER XIX

PRODUCTION PROBLEMS OF PREPARATION

Two types of problems can be distinguished in the field of production—one group arising in connection with the provision of the production environment and work materials, the other with the control of the actual production operations. In the first group are the problems of choice of a location for the enterprise, construction of buildings, choice and selection of equipment, arrangement of equipment within the plant, purchase and storage of materials and supplies, and provision of light and power. The second group of problems includes the long-range planning of production activity, the construction of a day-to-day work schedule, the dispatching of materials through the manufacturing processes, the determination of work methods, the inspection of goods produced, and the control of production costs. The remaining part of this chapter will be devoted to a discussion of some of that group of production problems which we may call problems of preparation. The second group—problems of operation—is treated in the following chapter.

LOCATION OF INDUSTRIAL ESTABLISHMENTS

After making the decision as to the type of business in which to engage, the businessman is next confronted with the question of business location. Where shall he locate his establishment? Shall he locate in New England, the Central West, the Southwest, the Great Lakes region, or the South? And if in New England, shall it be Maine, Vermont, Massachusetts, or Connecticut? Let us assume that the choice rests with Massachusetts. Boston? Springfield? Or Lynn? There are clearly two problems presented in connection with location: first, what factors must be considered in the choice of the broad area in which to locate, and second, after

the city has been chosen, what factors will determine the exact location within the city?

Raw Materials

For certain industries the problem of location has been solved by nature. Coal mines are located in those areas where coal deposits are to be found. The same is true in the case of gas or oil wells, lumber camps, and fisheries. Proximity to raw material is in these cases of primary importance. There are other industries, however, that are not bound by nature to the source of raw materials but which find it necessary to give very careful consideration to the raw material factor. This is principally true of those industries that use bulky and heavy raw material, those in which the finished product embodies only a small part of the raw material used, those in which the finished product is less costly to transport than are the raw materials, and those that use raw material of a highly perishable nature.

Brick and tile are manufactured in areas chosen almost exclusively for the presence of proper raw material—clay that cannot be transported great distances except at a prohibitive cost. The pottery industry of eastern and southeastern Ohio was located there for this reason. Sawmills invade the timber regions, since it is less costly to transport the sawmills to the logs than it is to carry the logs to the sawmill. Iron smelting is for the most part done near the iron ore mines (assuming, of course, that there is sufficient fuel) since most of the ore is waste material that adds nothing to the quality of the iron and is costly to transport. With the development of refrigeration the packing plants have tended to center in the meat-producing areas. In this case the finished product is much more compact and therefore less costly to ship than the animals themselves.

Perishability of raw materials accounts for the beet sugar refineries in western Nebraska, the fruit and vegetable canneries in Oregon, Missouri, Maryland, and California, and the salmon canneries on the banks of the Columbia River. It is reasonable to expect, however, that the rapid development of refrigeration will allow these industries to give greater weight to other location factors in the future.

Markets

One of the more important factors to be considered is the market for the good or service produced. To be sure, there are a great many industries whose products are not in the least perishable and which are easily and cheaply transported and who can thus ignore the market factor almost completely. Industries manufacturing hairpins, chewing gum, paper clips, ink and the like fall in this category. Others, however, are located almost exclusively with reference to the market. Producers of baked goods, ice cream and other highly perishable finished products are forced to locate close to their market in order to avoid waste and deterioration of their products. The publishers of newspapers are likewise "slaves to the market." Almost all the service industries such as painting, plumbing, and tree surgery are tied closely to the market.

Some industries are forced to consider in still another way the market to be served. In the furniture industry, for example, neither the raw material nor the finished product is perishable. Nor is promptness of delivery of the finished product a prime essential. But, other things being equal, the furniture industry locates more with reference to the market than to the source of raw material because of lower raw material transportation costs. Logs are compact and need not be handled with particular care. Furniture, on the other hand, must be packed very carefully and is too bulky for cheap transportation.

Labor

Another factor that may exercise a great influence upon the choice of an industrial location is labor. Obviously no industry can operate without labor power, and there are many industries in which labor costs constitute a very substantial part of the total costs of production. For these industries—such as many of the clothing, shoe, and cigar manufacturing units—the area with a plentiful supply of cheap labor has a distinct advantage. There are many industries, too, that do not demand labor in such great quantities but that must have a highly skilled type of labor. These industries, since the cost and time required for training would be excessive, tend to cluster around those centers where other plants of the same industry are to be found.

Doubtless some industries have thought of solving the problem by locating with reference to the market to be served and then transporting the necessary labor, along with the raw materials, from various sources. The difficulties encountered here are many. Aside from the cost of transportation, which must be borne either by the company or the worker, most employees have sentimental ties that would have to be overcome. They do not like to leave their friends and relatives, their schools, churches, and lodges. While labor may be enlisted to overcome a temporary shortage, transplantation almost never succeeds in recruiting a permanent labor supply.

Assuming that one location affords an adequate supply of suitable labor, there are other labor questions to be answered before a final decision can be reached. Obviously, an inquiry into prevailing wage levels must be made. No less important is the question of labor unions. Depending upon the strength of the union, its history, and above all, its leadership, a high degree of organization will be an advantage in one situation and a disadvantage in another.

Finally, the influence of State and municipal labor laws is very great. And it should not be assumed that the State or city with few or no labor laws is the one with the greatest drawing power. On the contrary, the enlightened businessman will recognize the depth to which the competitive level must sink in those areas where a few heartless and unscrupulous employers are allowed to exploit their workers without fear of State intervention. He will seek out an area where the "rules of the game" have been laid down and where State authority exercises constant vigilance in protecting the labor group.

Capital

Due to the relatively great mobility of capital the choice of a location need not turn exclusively upon the presence of sources of capital. For the most part capital seeks out and goes to the demand rather than waiting to be approached by it. Where all other factors are equal, there are certain real advantages to be gained from the presence of capital sources. It is generally true that lower interest rates are obtainable by those industries that are

located so close to the bankers and investors that the business is familiar to all.

Moreover, there are many instances in which businessmen are forced to resort to short-term credit, perhaps three, four, or five times a year, and immediate access to a source of capital supply is a great convenience.

Fuel and Power

Many industries—iron and steel, brick, glass, porcelain, for example—require heat for the productive processes, and are therefore forced to give a great deal of consideration to sources of fuel supply. Of course, where coal is used as the fuel, the transportation system of the country allows greater flexibility in location, but transportation costs are high, and in order to avoid them these industries usually locate in close proximity to coal-bearing areas.

Industries requiring much power to operate heavy machinery usually settle close to a cheap source of power. This, of course, accounts for the milling centers of Niagara, Rochester, and Minneapolis, the aluminum industry around Niagara Falls, and the great number of varied industries in the towns located on the swift streams of New England States—Fall River, Concord, Lowell, and Lawrence.

While power considerations limit many industries to a narrow choice of locations, it is safe to predict that the current rapid development of economical electric power transmission methods will liberate most industries from their natural power bonds.

Climate

The importance of climate is both direct and indirect. Because of the importance of proper humidity to raw materials and goods in process, the textile industry located originally in the New England area, despite the great distance from the source of raw material supply. One would naturally assume that with the development of artificial means of controlling humidity the textile industry would leave the New England States and move to an area closer to the source of supply, yet while there has been a substantial migration of mills to the South, the Northeast has continued to hold the greater part of the textile industry. Obviously

this has been due to factors other than climate, the most important of which are good power, well-trained labor, favorable transportation rates, and the presence of a great many service industries.

The indirect influence of climate on the choice of an industrial location is reflected in the general economic development of a community. Workers, bankers, and businessmen tend to avoid areas of extreme temperature.

Transportation Facilities

In the terminology of the economists, goods must possess place utility as well as form utility before they can be sold. In other words, it is not enough that raw material be processed and put into a form that is suitable to the buying public; the goods must be in the proper place. All of which means that transportation is one of the most important factors to be considered in the choice of an industrial location. Market areas are extremely broad. For many commodities the market is world-wide. Therefore, no business can hope to succeed unless it has transportation facilities that penetrate every part of its own market area. To be sure, there is a reverse relationship (that is, transportation facilities tend to spring up in those regions where there is a great deal of business), but one of the more important reasons why business gravitates toward cities like Chicago, St. Louis, and Philadelphia is to be found in the excellent transportation facilities available.

Nor is it enough that there is adequate physical transportation equipment. Transportation rates are of equal importance. The presence, therefore, of competitive facilities—steam railways, electric lines, water routes, motor busses, and air lines—is a real advantage in location.

It should be observed that the very rapid development of transportation facilities has diminished the force of the other location factors. With cheapened transportation it is possible for the producer and the consumer to be at greater distances from each other, and for the producer to draw his raw materials from a much wider area. Against these advantages should be placed the disadvantage arising from the fact that the competitive area of each businessman has been greatly broadened.

Miscellaneous Factors

In addition to the location factors that are of major importance to almost every type of industry, there are a great many more that can be classified as of minor importance, but many of these are not less worthy of careful consideration. In fact, in some industries the minor factors, or a part of them, are of importance equal to, if not greater than, some of the major factors already discussed. They are minor only in the sense that a great many industries can ignore them altogether; in other words, they are not of general major importance. Examples follow.

Frequently one finds an industry whose success depends upon its ability to keep abreast of the technical developments in certain highly specialized fields. For example many industrial units that are unable to maintain full-time technical and professional assistants on their own pay roll find it necessary to locate in districts where many professional and technical services are available. Frequently the seat of a well-equipped university or generously endowed research institution offers a definite location advantage for such plants. Occasionally we find an industry confined to a single nation because of a lack of technical experts elsewhere. Perhaps the most striking example is the manufacture of dental supplies in the United States, explained by the very great superiority of the dental profession in this country as compared with other nations. Still another example is the manufacture of surgical instruments and supplies, also in this country.

The presence of service or facilitating industry is often of great importance. This is particularly true of small manufacturing establishments that are unable to maintain machine shops or foundries of their own. Efficient service requires that they locate close to these services.

The company treasurer will be interested in insurance rates and taxes, and in some instances the State laws governing the formation and operation of corporations. The personnel manager will be interested in general housing conditions, educational facilities, social organizations, and opportunities for recreation and amusement. Industries having a high industrial accident rate will be interested in the adequacy of hospital accommodations, par-

ticularly if the enterprise is not large enough to support a hospital unit of its own.

Before we leave the discussion of location factors, two observations should be made, and doubtless have already been made by the critical reader. In the first place, despite the fact that industrial location is included here under the section on production, it should be clear that the choice of a location is not exclusively a problem of the production manager. Location does influence production problems, but location is of equal importance to those in charge of personnel, sales, advertising, and finance.

In the second place, the student should be warned against an attempt to list the factors of location according to relative importance. A generalized statement on relative importance is meaningless; it becomes meaningful only when applied to a specific industrial situation.

Sources of Information

The sources of information upon location factors are many, but they differ greatly as to reliability. It is necessary, therefore, to scrutinize all information very carefully and to weigh each bit of evidence accurately.

The most obvious source of information is the city, State, or national chamber of commerce, but most of the information thus gathered should be used only as a basis for further inquiry. This information includes types of business represented in the area, type and number of transportation agencies, popular distribution, and so on. While chamber of commerce officers naturally present information in such a way as to attract business firms to their area, and while a few may on occasion have been guilty of gross exaggeration, nevertheless some of the information prepared by these organizations is as reliable as can be obtained from any source.

The public service commission is, of course, the most direct and reliable source of information on railway, motor bus, and air service and rates. Local real-estate boards can generally furnish accurate data on building costs, zoning laws, and possibilities of physical expansion. From local headquarters of the labor organization one can secure information on types of labor available, wage scales, and general housing conditions. The State de-

partment of labor is the most direct source of information on labor laws and regulations. It is in a position to give wage and salary data, as well as data on quantity and quality of the local labor supply. The Secretary of State usually has all legal information incident to the formation and operation of a corporation. Insurance rates and tax levies can be learned from the State department of insurance and the county clerks or city clerks, in the order named. Occasionally local and State newspapers are in possession of valuable information concerning the size and quality of market areas.

While there is, as has been suggested, a great deal of information available from the sources named, most businesses find that much primary research must be done before a decision on location can be made. Either they have to go into the field themselves for study and observation or they must rely upon the services offered by the many commercial research organizations in the country.

Location within a City

The broad area and city having been chosen, there still remains the task of deciding where, exactly, in the city the business is to be located. As is true in the choice of location within broad areas, the factors to be considered, as well as the relative weight given to each factor, will vary according to the specific industry involved.

For factories and warehouses the location factors are greatly different from those considered to be of importance to other types of business.¹ Cheap land values, adequate labor supply, room for expansion, and nearness to good transportation facilities are the factors of primary importance.

BUILDINGS AND EQUIPMENT

Building Construction

The general location and the site of the plant having been chosen, the next problem is the construction of buildings—something very much more than providing protection from the natural

¹ See chapter on marketing, p. 418.

elements for men, materials, and machines. Buildings should be looked upon, as someone has said, as master tools of production. They should be erected with the knowledge that their character, materials, and structure have a very great influence upon the character and magnitude of production problems. Buildings vary in the ease with which they can be lighted, in the cost of heating, and in the costs involved in moving materials from one stage of the manufacturing process to another, in their ability to withstand vibrations set in motion by heavy machinery, in cost of upkeep and of insurance. The buildings, then, are not an end, but are instead a means of production no less important than are the machines and equipment housed in them.

Types of Buildings

Buildings may be of either the single-story or the multi-story type, and of various shapes, most of them being constructed in the shape of the letters **L, T, I, U, H, F**, or **E**. In all cases, however, construction must be preceded by very careful consideration of the nature of the industry and of the processes involved, the value of the land, the economy of moving materials from one part of the building to another, the possible expansion programs, and the degree to which visual control of operations seems desirable.

In those industries where good, natural lighting arrangements are essential or where fire hazards are great, the single-story building is usually preferable. This is likewise true where the machinery used is so heavy that floors above the ground cannot be utilized, or where the vibration of the equipment endangers the life of the building. Industries using very heavy or bulky materials in the manufacturing process usually find that the cost of internal transportation is much greater in the multi-story type than in the single-story building.

On the other hand, where an industry does not use heavy raw materials or machinery, and where land values are high, multi-story buildings are most frequently used to reduce the land cost per unit of available floor space. The multi-story type of building is usually preferred in industries such as flour milling, where gravity can be used in moving raw materials from one stage in the manufacturing process to another.

Building Materials

The construction of factory buildings generally can be classified under five heads; wood-frame construction, brick construction, mill construction, structural steel construction, and reinforced construction.

Wood-frame construction can be erected quickly and cheaply, but it depreciates very rapidly and, because of the great fire hazard, the insurance rates are high. Most industries, moreover, cannot be accommodated in frame construction because the floors are not strong enough to bear heavy machinery loads.

Brick construction is better for most industries than wood-frame construction inasmuch as depreciation costs are less and the cost of alteration is very little, if any, greater. This type of construction is not usually used by modern plants, however, since the fire hazard is great and the amount of wall space that can be devoted to windows is limited.

Mill construction, or slow-burning construction as it is sometimes called, is probably the most common type of construction found in industry today. It is characterized by brick walls and very heavy wood timbers. Usually the building is constructed as a number of separate rooms, each of which can be closed off from other rooms by means of fire doors in the case of fire. All timber is sufficiently heavy to delay the progress of fire, thus preventing the easy collapse of floors and walls that is common in frame construction. When further protected by an overhead sprinkling system, the fire hazard is greatly reduced. The chief advantages of this type of construction are found in the facts that insurance rates are relatively low and alterations can be made at a small cost. This type of construction is usually heavy enough to carry the floor load of most industries.

Steel-frame construction is characterized by brick walls topped by a roof that is supported by steel columns, girders, and beams. This type of construction is most frequently used for single-story buildings where it is desirable to have large floor areas free from supporting columns. It can be used also for multi-story buildings if the floor load is relatively light. Steel-frame construction has the advantage of low first cost and of low fire-insurance rates.

In those industries where permanence and sturdiness are desirable building characteristics, reinforced concrete construction is better than the types already described. This type is characterized by the use of a steel frame for both walls and floors covered with reinforced concrete. It is heavy, durable, and fireproof. As a result of these qualities insurance rates are low, maintenance and depreciation costs are low, and very heavy floor loads can be accommodated. The disadvantages grow out of the weight of the building. On account of the very great weight of the floors it is necessary to use a number of large supporting columns. Valuable floor space is thus wasted. Another disadvantage arises from the difficulty of alteration and expansion. That the disadvantages are offset by the advantages is indicated by the reputation that reinforced concrete steel construction enjoys.

Selection of Equipment

After provision has been made to house the manufacturing processes it becomes necessary to consider the quantity and type of equipment to be used. It is impossible even to indicate the exact type of equipment necessary for each industry because requirements differ so greatly. Instead, the importance of careful choice will be stressed, and some of the more important factors that must be considered by all plants will be enumerated.

Usually the production executive is faced at the outset with the necessity of making a choice between standard machinery and special machinery.² Where flexibility of manufacturing process permits, standard machines are most frequently used. In other words, in those industries where a variety of products involving a variety of manufacturing processes are produced, standard machines are ordinarily used. On the other hand, in industries producing a highly standardized commodity involving the repetition of a standard process, special machines constructed to fit particular needs are utilized as a means of reducing production costs.

Since the initial cost of standard machines is lower than that of special machines and since the resale value of standard ma-

² Standard machines may be defined as those machines that are constructed to perform more than one process or to process more than one kind, shape, or size of material. Special machines, on the other hand, are those that can be used only on a single process involving materials of specified kind, shape, or size.

chines is higher, standard machines are usually favored by industries whose products have an uncertain future. For example, novelty manufacturers, who can never be certain of future demand, and manufacturers of products which are subject to frequent change of design and style, as automobiles, usually find it more profitable to invest in standard machinery. Nevertheless, because of the very great saving in production costs resulting from the use of special machinery, some manufacturers prefer this type even though the immediate sacrifice is great.

Volume of production exercises a great influence on the choice. Unless there are orders sufficient to keep all types of special machines busy all of the time, standard machines are preferable. The cost of idle machines, frequently estimated at twelve to fifteen dollars an hour, is just as productive of red-ink entries as the cost of idle workers.

Other factors of importance in determining the choice between standard and special machines are installation costs, rate of depreciation, repair costs, power cost, vibration, space requirements, accessory costs, rate of output, and labor requirements.

The number of each type of machine needed will depend upon the production capacity of each machine, the number of working hours and shifts in each day, the frequency of breakdown, and the time necessary for repairs.

PLANT ARRANGEMENTS

Plant Layout

The testimony of every housewife will support the statement that the arrangement of the kitchen determines, to a very large degree, not only the amount of time and energy that must be expended in the course of preparing a meal, but also the quality of the meal prepared. A badly arranged kitchen necessitates countless steps from the sink to the cupboard, from the cupboard to the refrigerator, from the refrigerator to the sink, from the sink to the stove, and so on. In most kitchens an improvement in the arrangement would save great time and energy costs, not to mention the immeasurable costs of a husband's bad temper that may result from poorly prepared and indigestible foods.

What is true of kitchen arrangement is no less true of the arrangement or layout of a manufacturing establishment. Certain functions must be performed in the manufacturing process. Materials and supplies must be transported from one machine to another. Tools must be taken from the tool crib and returned. The finished product must be delivered to the shipping room, where it is prepared for shipment to customers. The performance of all of these functions is costly. The problem of plant arrangement or layout, the determination of the proper position of all equipment used in the production process and the proper routes of travel to be followed by raw materials and parts on their journey through the plant, are therefore highly important.

It is desirable wherever possible to determine the proper arrangement of the plant before the buildings are constructed. In this way the building itself can contribute greatly to production economy. In many instances the businessman must adapt his plant to the buildings as he finds them. In either situation there are many things that must be given serious consideration and many principles of plant arrangement that have general application.

Since the movement of raw materials from one stage in the manufacturing process to another is costly, most plants should be arranged to minimize the number of feet traveled. In most instances this calls for the arrangement of processes in a straight line. In all cases it calls for the arrangement of processes and departments in such a way as to reduce handling costs.

It sometimes happens that in the movement of materials the shortest distance does not result in the lowest cost. Take the milling industry and the copper ore reduction processes as examples. In both of these cases the raw materials are taken first to the highest point in the plant and there released to allow the force of gravity to draw them down through the production processes. It is conceivable that the total distance covered is double what it might otherwise be, but the unit cost is very much less than if the materials were moved along a horizontal straight line. Minimum movement of materials is desirable only if it is least-cost movement.

Prerequisite also to the determination of proper plant arrangement is a consideration of the nature of products and processes involved. For those industries producing a variety of prod-

ucts or those filling a great many special orders, plants are ordinarily arranged to group machines by kind; that is, to put all lathes in one department, all drill presses in another, and so on. In industries specializing in one or two standard products, plants are usually arranged to place machines in the proper process sequence.

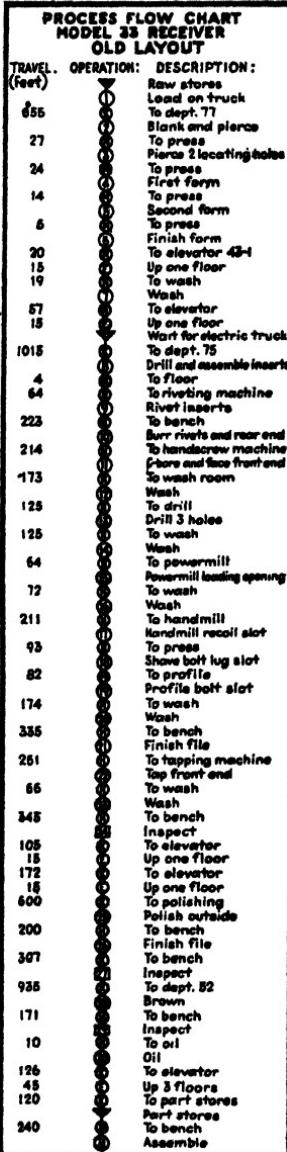
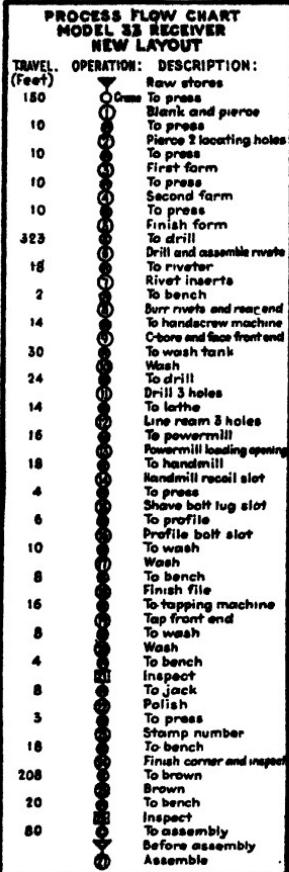
Each of these arrangements has certain advantages and disadvantages. Arrangement of machines by kind increases the ease of supervision since the foreman can devote his entire time to a single type of operation. An additional advantage is derived from increased opportunity to specialize the work of operators and repair men. Disadvantages arise from the increased travel of materials necessary to complete all processes, with resultant higher handling costs. A breakdown of one department results in the complete paralysis of the entire plant. Finally, since department heads are responsible for single processes only, difficulties of co-ordination of all processes may develop.

Arrangement of machines according to sequence of operations reduces handling costs, but a breakdown of a single machine may hold up the operations of the entire line. Moreover, the presence of the same kind of machine at several places in the plant frequently results in larger idle-machine costs. With more than one production line it is difficult to keep all machines operating at capacity.

Other matters demanding serious consideration before the plant arrangement can be finally determined are provisions for service departments, tool centers, materials and parts storage rooms, lockers, showers, toilets, lighting, ventilation, aisle space, working space necessary around each machine, and the possibility of future expansion of operations.

Layout Procedure

In most instances it is impossible to make a plant arrangement that will be satisfactory from the outset. The original plan will have to be modified time and again as practical difficulties show up in the plans. It is wise, therefore, to construct floor plans drawn to scale and to make cardboard templates representing each machine, and to arrange and rearrange the templates on the floor plans until all difficulties have been overcome. As shown in the



SUMMARY

	Old	New	Dif.
Total oper.	31	27	4
Total trav.(ft.)	7847	1058	6489
Total moves. No. Dist. No. Dist. No. Dist.			
By elec. truck (M) 9 4038 2 535 7 3504			
By hand truck (M) 22 3280 - - 22 3280			
By man (M) 6 157 23 427 17 210			
By conveyor (C) - - 1 100 1 100			
By elevator (E) 5 105 - - 5 105			

○ Denotes an operation
 ○ Denotes a transportation
 ▲ Denotes a temporary storage
 ▽ Denotes a permanent storage
 □ Denotes an inspection

(Courtesy Factory Management and Maintenance.)

FIG. 32.—Process flow charts, showing savings from rearrangement.

accompanying photograph miniature buildings and floor plans are sometimes constructed.

The importance of proper plant arrangement as a means of reducing production costs is indicated by the savings shown in Figure 32.

Lighting Arrangements

It has been said that not more than 15 per cent of industrial plants are well lighted. This is probably true despite the relationship that has been shown to exist between costs of manufacturing and lighting arrangements. The advantages of good lighting are many. In the first place, installation of an adequate lighting system to replace a poor one invariably results in a reduction of industrial accidents. Good lighting is conducive to less spoilage of materials, less eyestrain with its resulting fatigue, lower labor turnover, less difficulty of supervision, and lower unit cost because of increased production. One study including fourteen industries indicates that with an increase in average foot-candles from 3.4 to 12.1, production was increased by more than 16 per cent.⁸ The same study reports that a Detroit company, by improving lighting and keeping all other factors as nearly constant as possible, increased production about 25 per cent.

The tests of good lighting vary from industry to industry and from job to job. Lighting arrangements that are considered satisfactory for work in a warehouse might be wholly inadequate for sewing-machine work in a clothing factory. However, a few generalizations can be made. Light should be of the proper quality—that is, there should be no glare or unnatural color. Glare produces eyestrain and, by contracting the pupil of the eye, decreases efficiency. Good lighting requires that there be an equal diffusion of light over the area to be lighted. Unequal diffusion results in sharp and deep shadows, which in turn are the cause of many industrial accidents. Light should be of the proper intensity, but desirable intensity varies greatly from job to job. Finally, a lighting system must be easy to maintain and to clean. A very little dirt can greatly impair the efficiency of the most expertly designed lighting system.

⁸ R. M. Barnes, *Industrial Engineering and Management* (McGraw-Hill Book Company, Inc., 1931), p. 109.

Light may be distributed in three ways: by direct lighting, by indirect lighting, or by semi-indirect lighting. Direct lighting allows the light to come to the surface to be illuminated directly from the source of light, either directly from the bulb or filtered through a frosted shade. Indirect light comes to the surface to be illuminated by reflection from the ceiling and walls. The light bulb is covered by an opaque shade that reflects the light to the ceiling and walls and from there to the work surface. Semi-indirect lighting is a combination of the two described. A frosted shade covering the light bulb reflects some light to the walls and ceiling but at the same time allows some to filter through directly to the surface illuminated. Indirect lighting is generally considered to be best in terms of diffusion and shadows but is much more difficult to clean and maintain than is direct lighting. Because of its relative cheapness direct lighting is commonly used in factories today. Very important to good lighting is the color of walls and ceiling. Whereas white and ivory reflect from 70 to 80 per cent of the light, olive green and brown reflect as little as 15 per cent.

Power

The problem of power for industrial uses is too technical to be discussed at length in this work. Indeed, it is too technical for the average factory manager, and most of them are forced to resort to specialized power engineers for advice. Our purpose at this point is to state as briefly as possible the character and magnitude of the problem.

It should be clear that control of the production processes depends in a very large measure upon a regular and constant supply of power. Interruption of power supply results in idle machinery with attendant losses, idle men, and failure to fill orders according to schedule.

One of the most important power questions concerns the relative merits of purchasing power from an outside central station and the generation of power within the plant. In most instances the cost factor should decide, but there are exceptions to this rule. As is pointed out by G. E. Hagemann,⁴ plants that can use all of their exhaust steam for some of the manufacturing

⁴L. P. Alford, *Management's Handbook* (The Ronald Press Company, 1924), p. 345.



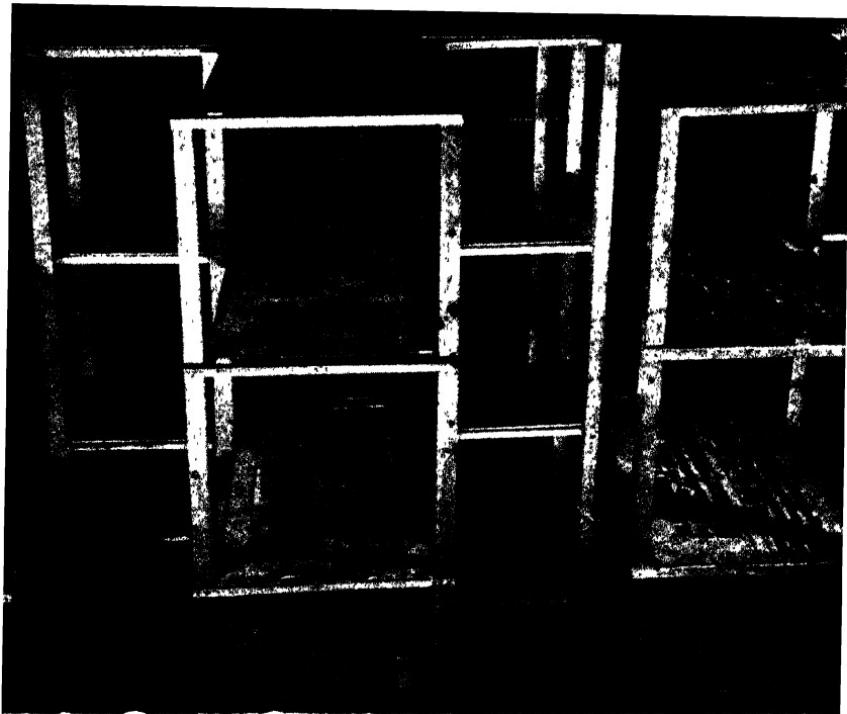
Powerful trucks help
solve the problem of
storage.

(Courtesy Yale and
Towne Mfg. Co.)

Adequate lighting increases opportunity for efficiency.

(Courtesy *Factory Management and Maintenance*.)





(Courtesy *Factory Management and Maintenance*.)

Building model used to ascertain the most efficient plant layout.

processes should probably generate their own power even though the unit cost is greater than purchased power.

Dependability of source of power supply is of prime importance. In most instances central power stations are dependable, especially in cities where power lines are buried, but there is always the danger that power from this source will be interrupted by breakdown or, rarely, by strikes. As a rule, however, the danger of interruption is not great enough to balance the cost of power production on a relatively small scale, a cost that is high because of the necessity of installing a power plant that will carry the peak load and because of the necessity of keeping a power engineer on the pay roll.

P U R C H A S E A N D S T O R A G E

Purchase of Materials

That the problem of purchasing raw materials is one of great magnitude is reflected in the fact that in 1929 the manufacturers of the United States spent approximately thirty-eight and one-half billion dollars for raw materials. Nor do these incomprehensible figures indicate the full importance of purchasing problems. That can be grasped when it is understood that the success of any production department depends to a large extent upon the successful performance of the purchasing functions. The primary problem of purchasing can be briefly stated: it is the provision of the minimum adequate supply of raw materials and parts of proper quality, at the right place, at the right time. Successful solution of the problem requires, first, knowledge of source of supply; second, standards and specifications to assist the purchasing agent in making his choice; third, arrangement for delivery at the proper time; and fourth, development of quick and accurate means of testing samples of all materials received to see that they measure up to specifications. A detailed discussion of purchasing problems is to be found in the marketing section to follow.

Storage of Materials and Supplies

Effective purchasing is fruitless unless it is accompanied by a system of storage that will keep materials, tools, and supplies

available at all times and protect them from loss or damage. Storage involves control. The specific storage responsibilities are (1) checking materials received to see that they meet specifications; (2) storing all goods safely; (3) issuing stores at the request of proper authorities; (4) maintaining a perpetual inventory to show

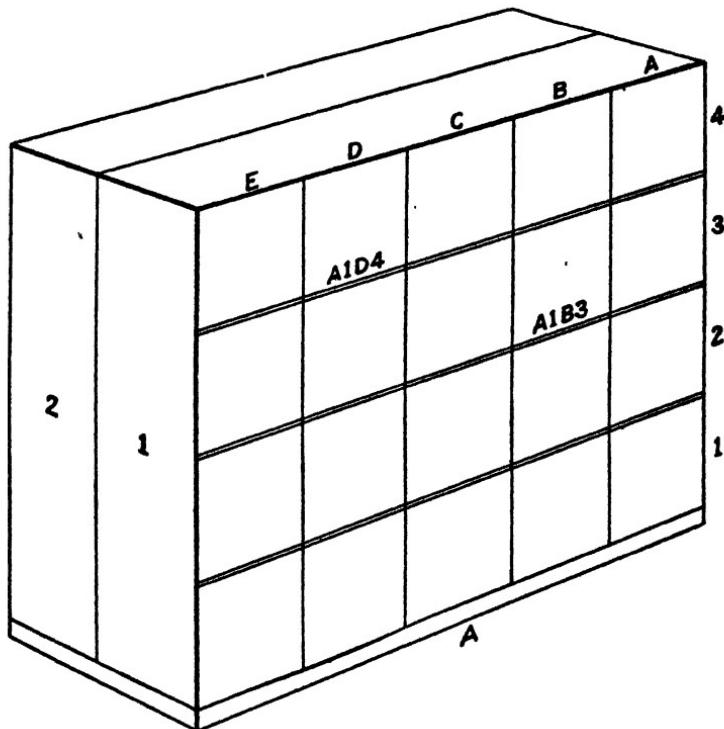


FIG. 33.—Mnemonic symbols as applied to storage bins.

the disposition of all materials; (5) and informing the purchasing department of stocks nearing minimum requirements.

✓ One of the more important storage problems concerns the location of stores, convenience and low cost being the primary considerations. In most instances these requirements are met by storing raw materials close to the starting place of production and finished products at the end. There is less general agreement on the question of centralization of stores. Wherever stores are centralized, less space is required, better supervision results, and

control difficulties are reduced. On the other hand, where stores are decentralized they are more easily accessible to the various operating departments, materials are transported shorter distances, and the storekeepers can keep in closer touch with the departments they serve.

Large manufacturing companies, some of which store as many as 25,000 articles, find it necessary to develop a system of mnemonic symbols and to arrange their areas, bins, racks, and shelves by a system of numbers and letters similar to street numbers and names. Items are called by number or symbol rather than by name. For example, the symbol A1B3 would refer not only to a particular item, but also to its location. As illustrated in Figure 33, A refers to the bin, 1 to the side of the bin, B to the vertical row, and 3 to the horizontal row. Occasionally mnemonic symbols include seven or eight numbers and letters.

S U M M A R Y

The problems of production fall into two broad categories: problems of preparation and problems of operation. Problems of preparation arise out of the necessity of providing a production environment. They are the problems which must be solved before production can be started.

The first production problem involves the choice of a location at which production is to be carried on. Although location factors vary in importance from industry to industry, most business finds it necessary to give careful study to such factors as raw materials, markets, labor, capital, fuel and power, climate, and transportation facilities.

Other production problems of preparation demanding very careful attention are the acquisition of serviceable buildings, the selection of equipment, the arrangement of equipment in the buildings, provision of light and power, and the development of purchase policies and storage facilities.

Each of the above problems must be approached with an eye to ease of production control—with an eye to the problems of operation, to which we now turn.

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P R O B L E M S

1. Where in the United States would you recommend that the following industries locate: a shoe manufacturer, a manufacturer of men's clothing, a steel mill, a paper mill, a textile mill, and a watch-manufacturing establishment?
2. "The best labor supply will be found in the most thickly settled areas." Do you agree with this?

3. "The wise business manager will find a location where taxes are lowest." Is this always true? In what circumstances might you have to modify the statement?
4. How do you account for the fact that the first textile mills located in New England, far from the source of raw materials? Do you anticipate any changes? Why or why not?
5. "We'd all be better off if we would learn that nearness to competitors is a disadvantage. For my own part, I intend to locate as far from my competitors as I can." How would you answer this statement?
6. What are the advantages and disadvantages of city and suburban locations for wholesale houses? For factories?
7. "With modern methods of transportation and communication it makes very little difference where one locates." Comment.
8. "A factory building is much more than protection against the elements. It is a tool of production." Explain this statement.
9. List the advantages and disadvantages of standard machinery. Of special machinery.
10. Make a drawing of the present arrangement of your mother's kitchen. Make a second drawing showing the most efficient arrangement possible.
11. List the problems that might arise in an office that was improperly arranged.
12. "The wise purchaser will find one reliable source of supply and stick to it." Cite examples supporting, as well as discrediting, this statement.
13. What arguments do you think of in favor of mnemonic symbols? Do mnemonic symbols have other than industrial uses?
14. What relationship do you see between personnel problems and the provision of adequate lighting?

CHAPTER XX

PRODUCTION PROBLEMS OF OPERATION

After making provision for buildings, equipment, and materials, the production executive is faced with the problem of devising methods of production control, which has been defined as "that system which, extending over a long period of time, controls the order of movement of the elements of a productive program in relation to each other and to the whole."¹ Production control involves, first of all, a very careful preplanning of manufacturing processes, of methods to be followed at each stage in the entire process, and the time and place for each operation. It involves also a constant checking on all operations in order to prevent departure from the standards set and in order to prevent work from lagging behind the time schedule. Establishment and enforcement of both time and work standards are the essence of production control.

Some production control has been exercised from the time of the first manufacturing operation, but, until the period of the World War, during most of the time and for most manufacturing plants that control was haphazard. The process of getting men, machines, and materials at the right place at the proper time was performed from day to day as the immediate need arose. It was not, in other words, preplanned production control.

SCIENTIFIC MANAGEMENT

Preplanned production control, which is the heart of modern scientific management, is the chief contribution of Frederick Winslow Taylor (1856-1915), whose life was in many respects as unusual as were his contributions.² Born in Pennsylvania to a

¹ George D. Babcock in *Management's Handbook*, *op. cit.*, p. 599.

² For an excellent discussion of Taylor's life and work, see H. B. Drury, *Scientific Management* (Columbia University Press, 1922), *passim*.

well-to-do family, he received a part of his preparatory education in Europe. He returned to the United States to enter the Harvard Law School but was prevented from doing so by poor eyesight. Not content to remain idle and to live off the family income, he apprenticed himself to a machinist. He learned the trade and was ready to go to work in 1873 but the panic of that year prevented his finding employment in the machinist's trade. He did secure employment as a common laborer with the Midvale Steel Company, where he remained for eleven years. His promotion was rapid and he was finally made chief engineer.

From 1880 to 1882 he filled the position of gang boss and it was during this time that the seeds of scientific management were sown. It was as gang boss that he discovered that not only did the workers not know exactly what was expected of them but that employers did not know what could be expected of the workers. Industrial indifference and "soldiering" on the part of employees were everywhere apparent. To Taylor these reflections of management failure constituted a challenge, and it was to the meeting of this challenge that he dedicated his energies.

Taylor's Principles

His first step was in the direction of arousing the worker's interest through a modification of the wage-payment plan.³ His second step was an attempt to control not only the quantity of work but also the quality of work through the use of standardized conditions of work, tools, machines, and so on. Finally, he attempted to improve management efficiency by applying the principle of specialization to the management function.⁴ Out of this work Taylor's now-famous principles of scientific management were crystallized—principles of very wide application in modern manufacturing industry.

Taylor's basic principle involves continuous experiment with materials, tools, machines, processes, and operations for the purpose of "discovering the laws of manufacturing economy." This is the approach of the pure scientist. It is an attempt to discover just how each of the factors of production behaves and how each

³ See discussion at p. 237.

⁴ See discussion of the functional organization type at p. 515.

affects the others. His second principle involves the formulation of standards from the data obtained in experimentation. This is the work of the applied scientist. On the basis of experimentation specifications covering materials, tools, time of operations, men, and machines are drawn. The third principle involves the careful preplanning and directing of all work through all processes resulting in assurance that men, materials, and machines are brought together at the right place at the proper time. Finally, the fourth principle involves the enforcement of the standards established. Recognizing the human tendency to "backslide," Taylor's fourth principle provides for a system of rigorous inspection.

The primary aim of this chapter is to examine some of the specific problems of production control. It should not be supposed that all that is known about production control today is the result of Taylor's work. Others have contributed greatly. No history of the subject would be complete without the names of Henry L. Gantt, Morris L. Cooke, Carl G. Barth, Sanford E. Thompson, Frank B. Gilbreth, and Harrington Emerson, but the influence of Taylor, even on these men, cannot be denied.

Economic Lot Sizes

One of the more important problems of production control involves the determination of the number of production "runs" to make during the course of a year. Assuming that the production executive knows the total amount of goods to be produced during the year, how shall he distribute the annual production over the year? Will costs be lower if he produces the total amount in one run, or would it be wiser to divide total production between more than one setup? If he decides to produce the year's output from one setup, a large amount of money will necessarily be tied up in raw materials, a larger amount of capital equipment will be needed, and the costs of storing the finished product until sold to customers will mount greatly.

If the production is to be distributed more evenly throughout the year, how many setups will be made? Will production be divided into two, three, six, nine, or twelve parts? Let us suppose that the manager decides to produce the goods month by month as they are needed. The amount of money invested in raw materials at one time will be greatly reduced, less capital equipment

will be needed, and storage costs for the finished products will be less. On the other hand, it will be necessary to bear the costs of twelve different setups, and because production is on a smaller scale the unit cost will probably be somewhat higher.

Either of these decisions would be accompanied by advantages and disadvantages. The problem becomes, then, the determination of the most economical number of setups. The decision, which may result either from trial and error or from the application of a mathematical formula, depends upon consideration of many variable factors: cost of materials, time required for each of the operations, frequency of design change, inventory costs, weight and bulk of materials handled, durability of materials, floor space available, cost of preparing machines for production, cost of each piece produced, interest rates, number of pieces to be produced during the year, and so on.

PRODUCTION PLANNING

The work of the production department involves the use of buildings, machines, materials, tools, conveyors, supplies, and workers. The production executive, in order to fill orders promptly, must rely on the planning department's ability to make all of these production factors available at the proper time. Suppose, for example, that a salesman has forwarded an order for a special type of lock, with the stipulation that the goods will be accepted by the customer only if received within thirty days. The production manager, because of other work in process, is not sure that this order can be shipped within the thirty-day period. The planning department is therefore asked to determine whether the proper materials, men, and machines will be available in time for shipment, and if so, to make the necessary arrangements. In other words, planning involves the determination of how many men, machines, and materials are available; what men, machines, and materials will be used in filling specific orders; and when they will be used. Production planning may be compared to the preparation of a railway timetable. Routes are outlined, terminals are established, and the time of arrival at and departure from each point along the route is specified.

In those industries that perform the same highly standard-

ized manufacturing functions over and over again the problem of planning is less difficult than in the "jobbing" industries in which each order calls for products of different shape, size, or character. In the automobile industry, for example, a standardized commodity is produced by standardized operations. After the original production plans have been perfected and after everyone is instructed in the detail of his own responsibilities, little revision in plans is necessary. In industries of this type a separate planning department may be unnecessary. In a machine shop, however, each order presents a special problem. It calls for materials of specified character, for various machines and skills, and for delivery on or before a specified date. In addition to the actual work involved in fabrication, the order necessitates preplanning to insure adherence to both the physical and time specifications.

In former times, when business units were small, no separate planning department was necessary even in jobbing industries because the foreman could co-ordinate the several manufacturing functions. Machines were not so numerous and orders were not so many that the foreman could not arrange for the filling of any order. With the development of business units made up of many departments, and with the coming of orders involving various complex machine processes, it became necessary to delegate the planning of production to specialists.

Planning Functions

Order Analysis.—The first function to be performed by the planning department is order analysis. Each order must be examined carefully for specifications relating to machines, men, materials, tools, and supplies. In the event that special tools are required, an order is dispatched to the engineering division instructing it to prepare proper tool designs, which in turn are executed by the toolmaking division. When special materials or supplies are required, a requisition is sent to the purchasing department. The personnel department receives inquiries and orders for specialized labor. These requisitions also usually contain instructions as to time of delivery.

Routing.—The next step in production planning is routing the job through the plant. This involves, first, determination of

sequence of operations, and second, determination of the most efficient and economical route to be followed by the raw materials as they pass from one stage in the manufacturing process to another. The person responsible for routing endeavors to arrange for the simplest flow of work through the plant and the most efficient utili-

ORDER and JOB ROUTE CARD No._____

Pieces _____		Part No. _____					
Class _____	Blue Print No. _____	Order No. _____					
Part Name _____							
Kind of Material _____							
Size _____		Bar Length _____					
Dept. No. _____							
Dept. No. _____							
Dept. No. _____							
Dept. No. _____							
Dept. No. _____							
Remarks: _____ _____ _____							
Date Issued	Date Wanted	Job No.	Pieces	Time Allocated Fixed Rate		Travel Time	Clock Time
Machine No. | Operator _____					Start		
	Name _____ No. _____				Stop		
Machine |					Start		

Fig. 34.—Job route card.

lization of existing equipment. Route sheets usually accompany work through the various departments.

Scheduling.—Another phase of production planning is scheduling. This involves the determination of the time that should be required for the performance of each of the operations and a statement of the time at which the finished product should be ready for shipment. Frequently the person making the schedule starts from the delivery date specified and works backward, indicating the days on which each operation must be completed if the order is to be filled on time.

The problem of scheduling is influenced by many factors, some of which may be outside the control of the business. Final

determination of the schedule depends upon the time required for procurement of materials and supplies either by purchase or manufacture, the time necessary for final assembly of parts, the availability of machines, and the dates of delivery specified by customers.

In instances where the finished product results from the assembly of many parts, the problem of scheduling is more difficult. All parts entering into the assembly of the finished products do not require the same time for manufacture. In order to avoid waiting and storage costs, it is important that the manufacture of each part be started just in time for it to reach the assembly room simultaneously with all the other parts.

Dispatching.—The final stage of planning is known as *dispatching*. This is the clerical function that involves the preparation and release of forms that put planning into effect. Specific duties of the dispatching division include the assignment of work to machines and workers in accordance with the route sheets and time schedules, the notification of foremen of relative urgency of orders, the release of tool and supply orders that will assure availability of tools and supplies to workers at the proper time, the fixing of responsibility for moving work from one operation to another, the checking of actual progress of work against the schedule, and the preparation of records of defective work and idle man and machine time.

Mechanical Control Devices

* *The Planning Board.*—In plants that have hundreds of machines in operation at the same time it is impossible to get a clear impression of the status of all work in process by consulting the day-to-day records and reports received by the planning department. A graphic way of presenting clearly the picture of work in process is the planning board, now used in every department in most large plants as the means of visual control.

The planning board, an example of which is shown in Figure 35, usually contains three horizontal rows of hooks or compartments, the number of hook or compartment rows being equal to the number of machines used or processes completed in the department. In other words, for each machine or workplace three

hooks or compartments, arranged vertically, are provided. The top row contains the operation tickets of the work in process at the time. The second row contains the orders for work to be started on completion of the work in process—that is, work for which machines, materials, tools, and men are available. The third row contains a record of the work that has been assigned to the machine or workplace, but for which the material and tools are not yet available. On completion of the work in process the operation

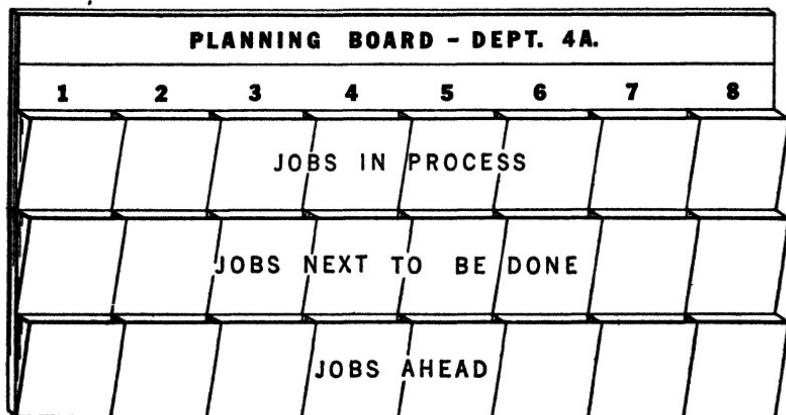


FIG. 35.—Pocket type of production planning board.

tickets are removed from the planning board, being replaced by the orders and operation tickets on the second row. Likewise, the operation tickets of the work next in order on the third row are moved to the second row.

With this arrangement the dispatch clerk can see at a glance the condition of every machine and workplace in a department. The foreman of each department can survey the situation in his department quickly and can arrange the day's work in a very short time. Thus freed from the necessity of planning the work to be done, the foreman can spend the major portion of his time in removing production interferences and in improving the efficiency of his working force.

The Progress Chart.—Another mechanical production control device is the progress chart, a device that is almost indispensable if the planning department is to keep an accurate day-

to-day check upon work in process. As stated, one function of the planning department is the preparation of a production time schedule. Without the progress chart this department has no ready means of learning whether work is running ahead of or behind schedule time.

As illustrated in Figure 36, the progress chart is prepared in tabular form with time units, usually days, marked along the top

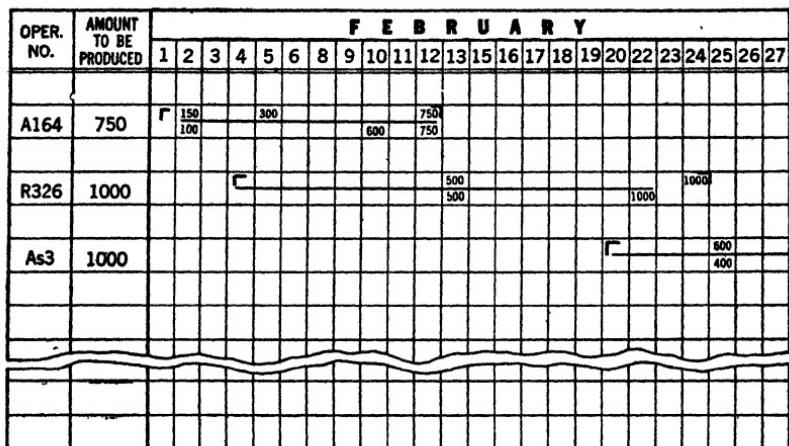


FIG. 36.—Production progress chart.

horizontal scale, and manufacturing operations, together with the quantity to be produced, listed vertically on the left side of the chart. When the schedule for any operation is made, appropriate symbols are placed on the chart to indicate the time at which the operation is to begin, the cumulative figures of quantities to be produced from week to week, and the time of scheduled completion. This is, in other words, the graphic picture of the time standard that has been established by the planning department. From day to day a line representing the actual progress of work is drawn on the chart. This line starts in the space corresponding to the date of the beginning of the job and continues until the work is interrupted or completed. Interruptions are shown by breaks in the line, the reasons therefor being indicated by appropriate symbols. A glance at the chart informs the observer how actual work checks against the schedule.

OPERATION CONTROL

It will be recalled that one of Taylor's principles of scientific management involves the establishment of standards covering the best materials to use, the best tools to use, and the best methods of performing any task, all of which constitute an important part of production control. Establishing standards of work methods is the primary prerequisite of operation control, which may be defined as the regulation of quantity and costs of production by the one best method of performing any given task.

Time-and-Motion Study

The principal method used for setting operation standards is time-and-motion study, which entails the observation and recording of the time required to perform each detail of a total operation, and also an analysis of worker movements, with the intention of eliminating useless motions and arranging motions in the most efficient sequence. The result of time-and-motion study is a method of performing work with a minimum expenditure of effort and in the shortest possible time consistent with worker health and safety.

Standardization.—The first step in making a time-and-motion study is to standardize all materials, tools, machines, and general conditions in which the work is to be done. It should be clear that motions and time cannot be standardized if there is a variation in the materials, tools, and equipment with which various employees have to work. But standardization is not enough. It is necessary that the *best* materials, the *best* tools, the *best* machines, and the *best* general working conditions be provided. For example, Mr. Frank Gilbreth discovered that standard times and motions in bricklaying cannot be determined satisfactorily until adjustable scaffolding upon which the work is to be done is provided and the proper height of the working surface determined and kept uniform.

Motion Study.—The next step in time-and-motion study is the separation of the total operations to be performed into elementary motions or *therbligs*, as they were called by Mr. Gil-

breathe. It is only after an operation has been broken down into elementary motions, such as reaching, searching, selecting, transporting, waiting, planting, and resting, that an accurate analysis can be made. These motions are studied in the light of rhythm, timing, distance, sequence, and fatigue, and after data has been analyzed, movements contrary to the laws of motion are eliminated, excess distances are reduced, and the motions remaining are arranged in the sequence conducive to most efficiency.

Time Study.—The next step involves observing and recording the time necessary to complete each task. Most frequently the time-study man has a stop watch with which to record the time of each element. But if the individual motions are so rapid as to preclude accurate observation, a large clock whose face is divided into tenths or hundredths of seconds is placed behind the operator and a motion picture is taken of the entire process. The time of each motion is permanently recorded on the film and running the film at a slow tempo permits detailed study of all the operations. Excessive cost prevents widespread use of the camera method, and in most instances the stop-watch method can be used even with fairly rapid motions. When individual motions are too rapid for accurate timing, the time required for each element is determined by first recording the over-all time for all but one of the elements and subtracting this figure from the time required for the entire process. This "cycle" method gives the time required for the element omitted from the observation.

Take as an example the operations involved in placing duplicate padlock keys in a wire ring. The entire process is made up of five elements: (a) picking up wire ring and placing it in vise, (b) spreading ring open with small hand tool, (c) picking up two keys and placing on ring, (d) closing ring with small hand tool, and (e) releasing ring from vise and placing it at one side. For convenience these steps will be called *a*, *b*, *c*, *d*, and *e* respectively. The total time, which we will designate as *X*, is therefore equal to $a + b + c + d + e$. The time for *e* is *X* minus $(a + b + c + d)$; the time for *c* is *X* minus $(a + b + d + e)$, and so on. In this last example the sequence of observation would be *d* + *e* + *a* + *b*.

Whatever the method of observation employed, it is necessary to time each element many times before setting a standard time.

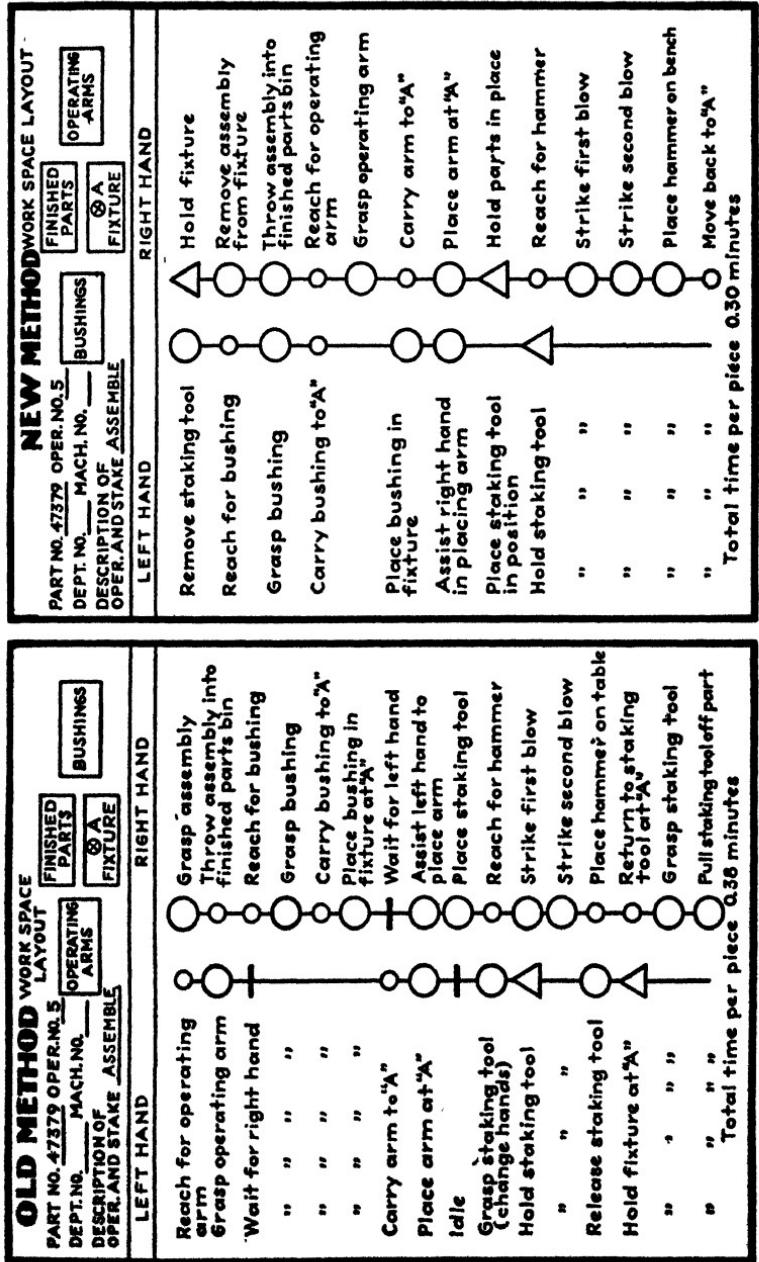


FIG. 37.—Motion charts showing improvement resulting from time-and-motion study.

(Courtesy Factory Management and Maintenance.)

The greater the number of observations, the less chance there is of serious error. Usually the standard time is determined by averaging the results of from fifteen to fifty observations. There is always some question of whether the arithmetical mean time, the modal time, the minimum time, the best time, or the "good" time will be used, but this decision involves a degree of technicality that cannot be profitably discussed at this point.

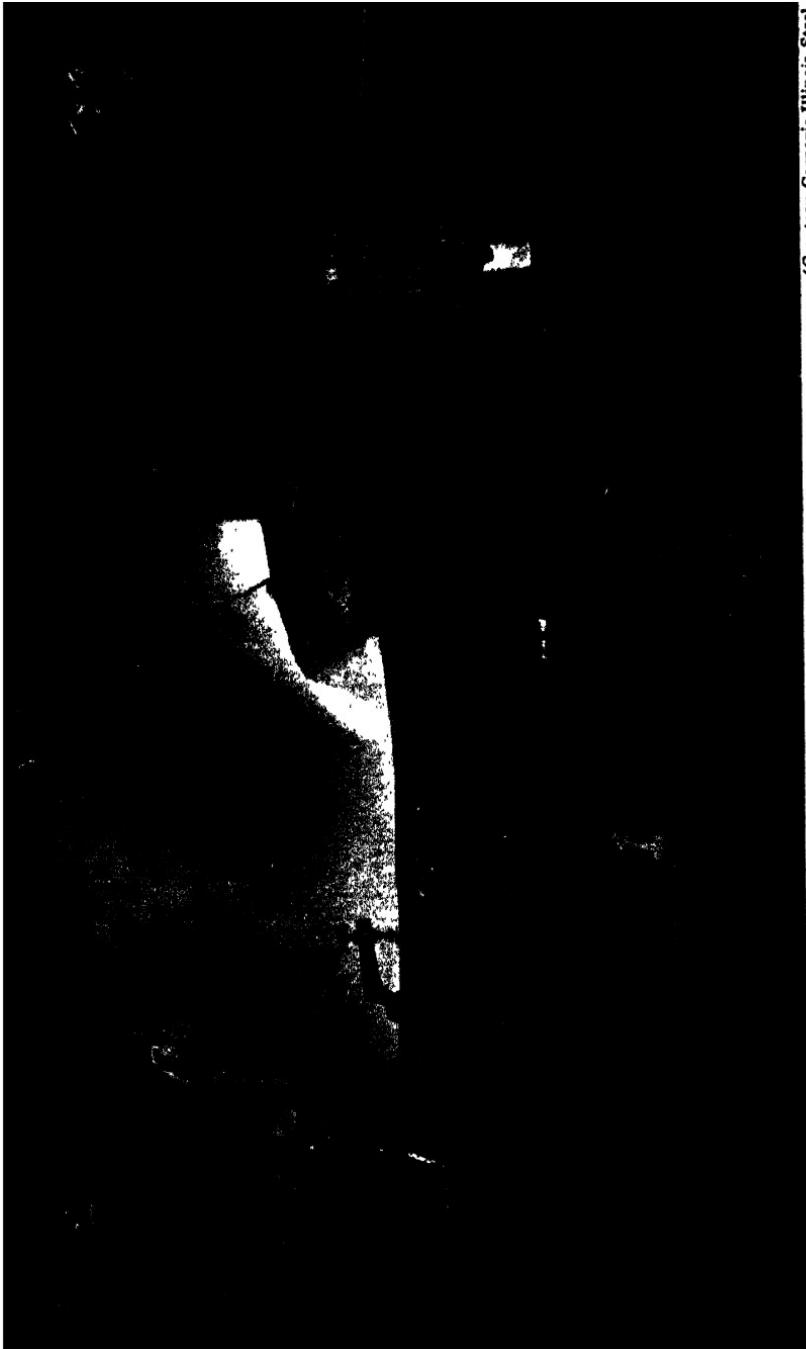
In any event, the accepted average time for each element is totaled, and the result is the *base* time for the entire operation. This is a record of the standard time required to satisfy the physical demands of the operation without regard to possible interruptions. The standard *task* time, described by Taylor as the rate at which a good man can work for ten years without harmful physical effects, is the base time plus allowance for fatigue, machine delay, preparation time, personal needs of the workers, and other unavoidable delays.

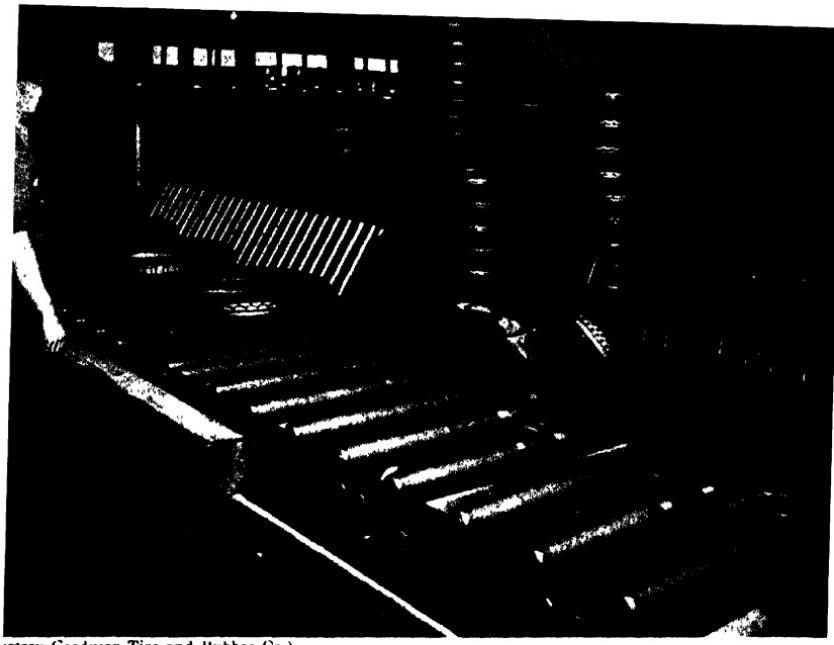
A number of interesting questions arise in connection with time-and-motion studies. In the first place, who shall be assigned to the task of making the studies? Shall a present employee do the work or shall the services of an outside man be secured? If a person regularly employed by the company is assigned to the work he may, as a result of his great familiarity with the plant, overlook obvious faulty conditions. Or, if he is in any way responsible for present methods and conditions of work, he may be constrained to justify the standards already set. In the event that an outside man is called in to make the study he must work under the handicap of unfamiliarity. The decision in most cases rests upon factors present in each specific plant, and the only safe generalization possible is that the man chosen to do the work must be well trained in time-and-motion study.

Another question refers to the employee whose work is to be observed. The problem is not solved by the decision to study an average worker, because in the absence of standards an average is meaningless. With the variation in machines, tools, materials, and conditions that prevails before the time-and-motion study is made, an average would have to be determined for each set of circumstances. Again, the average worker under prevailing conditions might be much above average under the conditions set for the time-and-motion study. If the most rapid employee is observed,

Tapping a heat of steel from an open-hearth furnace.

(Courtesy Carnegie-Illinois Steel





Courtesy Goodyear Tire and Rubber Co.)

Conveyors like these reduce cost of handling materials.

Inspection by the "submarine test."

Courtesy Goodyear Tire and Rubber Co.)



the resulting time standards may work a hardship on other workers. On the other hand, if the slowest employee is observed the company may fail to benefit from the studies as much as it should. Although it is desirable to avoid extremes, the factor of primary importance in making this decision is the degree to which the employee shows a willingness to co-operate, otherwise the study will be a failure.

Although organized labor has many objections to time-and-motion studies, the results are frequently reflected in improved employee morale, and almost always in increased and more accurately determined wages, fewer industrial accidents, less occupational illness, less labor turnover, better quality of product, and lower over-all unit costs.

CONTROL BY INSPECTION

Because of the human proclivity to backslide, the establishment of standards of materials, tools, machines, and finished products is useless unless great care is exercised in maintaining them. Enforcement of standards is one of the primary aims of inspection, although it is not only the only one. If unnecessary expense is to be avoided, someone must be responsible for preventing further processing of material that has been spoiled in operation. Loss of materials and tools must be prevented. Companies must avoid paying employees for defective work. Imperfections in materials, tools, and machines that result in defective finished products must be discovered. The size, shape, and character of many parts must be measured with great accuracy, a highly important and necessary operation in complex modern industry, where, as in the automobile industry, there are hundreds of operations that require accuracy to the .00025 of an inch, and thousands of operations that require accuracy to the .001 of an inch.

Inspection of raw materials and supplies is usually performed by employees in the receiving department before goods are finally accepted. Tools are usually inspected regularly by the persons in charge of the tool stores. There are two methods of inspection in general use—central or crib inspection and floor inspection.

Central Inspection

Under the central inspection method all inspection is done in an area set aside for that purpose, usually one inspection area in each department. The advantages are many. The conditions under which the work is done are ideal. Because inspectors are not annoyed or distracted by the regular production environment greater accuracy results. Supervision of inspection is facilitated, which makes it possible to secure efficient work from a less skilled group of inspectors. Central inspection, on the other hand, may be more costly if it necessitates much additional movement of materials and parts, as is especially true of those industries that process heavy or bulky materials.

Floor Inspection

Floor inspection involves the inspection of goods on the production floor as they move from one stage in the manufacturing process to another. In other words, the goods are inspected right at the machine or work station. Because of the greater difficulties under which they work and because of the increased difficulty of supervision, floor inspectors must be of a higher type than central inspectors and must be paid accordingly. The noise and activity of the production environment increases the chance of error, and since the work inspected is associated with the employee responsible for it, the danger of personal difficulties is ever present. Floor inspection is well suited to those plants that would experience great difficulty in rearranging machinery and other equipment to accommodate a central inspection crib.

In some plants the foreman of each department performs the inspection functions along with the rest of his duties, but as we shall see in our discussion of the functional type of organization,⁵ the typical foreman has too many functions to perform satisfactorily without the additional burden of inspection. Furthermore the foreman as a production executive is primarily interested in production and may be inclined to stress quantity of output at a considerable sacrifice of quality. In most instances it is desirable that the persons responsible for inspection be direct subordinates of the plant manager and segregated into a separate inspection

⁵ See p. 515.

division. In this way the inspectors can exercise final authority in the determination of when goods are standard. They should have the authority to stop all processes that are producing defective

MOTOR INSPECTION REPORT

It is recommended that the following work be attended to immediately:-

DATE INSPT'D PLANT SLACK
DEC 18 PERIODS
BY T.H. WED AFTERNOON

REPLACE F.F. BEARING & CLEAN WINDING 20 HP. SNAGGING DEPT.
ORDER NEW SET CONTACTS 25 HP. COMPENSATOR MACH. SHOP

The following work to be done at next inspection:-

Install contacts 25 hp. compensator mach. shop
Install arcing tips elevator control

Parts required

• Contacts 25hp comp mach shop
• Alternators for boost control (instock).

Tom Heatly
INSPECTOR

(Courtesy *Factory Management and Maintenance*.)

FIG. 38.—Rigorous inspection prevents backsliding.

goods without having to go through the intermediary department foreman. Otherwise much loss may result from continued operation on spoiled materials.

Whatever the method of inspection, certain general principles must be observed if inspection is to be done properly. The defect must be discovered in the least costly stage. This suggests the

wisdom of inspecting at several steps in the manufacturing process rather than waiting until goods are finished. As an incentive measure at least a part of the burden of defective work should be borne by the operator. Responsibility for quality production must be definitely fixed in order to avoid "buck passing." Of primary importance is the principle that inspection must not be looked upon as an exercise of plant police power, because inspection is very much more than the discovery of defects. Successful inspection becomes an integral part of the general training program and must be directed as much toward the prevention of future defective work as toward the detection of current mistakes.

C O S T C O N T R O L

The records that have been referred to thus far have been records of physical units of goods, materials, men, operations, and processes. Although these records are of very great importance to successful production control they are not all that are needed. Since we live in a price economy it becomes necessary to have these records translated into terms of dollars and cents through industrial cost accounting. Cost accounting thus becomes an important instrument of production control.

Cost versus General Accounting

The significance of cost accounting as a control device can at the outset best be shown by contrasting it with general accounting, with which most readers are familiar. General accounting is used to show the status of a business in terms of dollars and cents in its relationship to the outside world. It indicates what the business has bought, what it owes, what it has sold, and what is owed to it. It is a record of past external relationships. To be sure, general accounting records are of tremendous value in the operation of any business, but since much production activity is related to internal affairs only, general accounting records do not contain all of the information needed by the production manager. More important to the production manager are the records of internal cost relationships that bear directly on his production problems. The production manager needs to know the unit costs of the various

items used in the manufacture of the finished product. He needs to know which goods make unusual profits and which are manufactured at a loss. He needs to know the financial requirements of his department in order to facilitate adequate preplanning. He needs records that will enable him to compare costs of goods made at different times and with different methods. He needs standard cost records against which he can check the operating efficiency of his plant. In brief, the production manager needs a dollar-and-cents record of what is happening inside his plant in order to control more efficiently plant operations. Cost accounting furnishes this record.

Consideration of the factors with which cost accounting deals will serve to clarify its relationship to production control. The items that enter into the cost of manufacturing a product are material cost, labor cost, and burden or shop cost.

Material Costs

Material costs may be subdivided into direct material and indirect material cost. Direct material costs are the costs of materials that enter directly into the manufacture of an article, such as the cost of leather in shoe production. Other materials, such as lubricating oils and supplies, necessary to complete the production process but not entering directly into the product, represent indirect material costs.

Labor Costs

Labor costs are subdivided into direct labor and indirect labor costs. The wages and salaries of those persons who work directly on the product are direct labor costs, and the wages and salaries of other persons who assist in the production of an article only indirectly are indirect labor costs. Examples of indirect labor costs are the wages and salaries of supervisors, repair men, clerks, and inspectors.

Burden Costs

Burden or shop costs are made up of indirect material costs, indirect labor costs, and the costs of such other services and expenses as depreciation, repairs, power, cleaning, and lighting.

Cost Accounting Methods

It is the relative importance of the foregoing cost items in the production of goods that is of primary interest to the production manager. The method of distributing these cost items varies from plant to plant, but the two most commonly used methods are the job order method and the process method. It cannot be said that one is better than the other; the choice depends upon the needs of a particular plant.

The job order method of cost distribution involves the computation of costs for each job manufactured, with the total cost divided by the number of pieces produced to ascertain the cost per piece. This method is most useful in plants that produce a variety of goods according to customers' specifications. The process method involves the computation of costs for each process for a given time period, the unit cost being determined by dividing the total cost by the number of pieces produced. This method is most frequently used in those industries, such as flour milling, where it is impossible to identify the separate units of the product, and in those industries, such as the manufacture of electric light bulbs, where the product is highly standardized. The use of either method gives the production manager accurate cost information at intervals sufficiently frequent to maintain effective control. Both methods provide information which makes it possible to determine the causes of excess costs.

So far we have discussed cost accounting as a means of discovering actual costs. However, if cost accounting is to be utilized also as a control device, it must make provision for the establishment of cost standards. In other words it must inform the production manager what costs should be. This is the function of standard costs, which may be defined as the statement of what production costs should be under the standardized conditions provided by the plant management. They enable the production manager to learn the degree to which his department is operating efficiently and they set the goal toward which he must work.

In a great many instances the production manager and other business executives are not trained in accounting, but if they are to keep accurately informed of past activities and if they are to control future activities intelligently they must spend a great deal

of time scrutinizing cost accounting reports. Hence it is of primary importance that cost accounting reports and records be simple enough to be understood and used by persons other than trained accountants.

S U M M A R Y

Problems of operation arise in connection with the day-to-day control and regulation of materials, equipment, supplies, men, machines, and processes. Among the more important problems of operation are production planning—the routing, scheduling, and dispatching of jobs through a plant; the establishment of operation standards and work methods; the inspection of work methods, machines, equipment, materials purchased, and goods produced; and the determination of production costs. It was in the control of operation problems that F. W. Taylor made his most notable contributions.

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P R O B L E M S

1. What exactly does the term *production control* mean to you? Could there be such a thing as personnel control? Finance control? Marketing control?
2. You have been asked to give a short talk on scientific management. Outline the talk that you would give.
3. Make a list of avoidable costs that might arise in the absence of production planning. Indicate how adequate planning would eliminate this occurrence.
4. What advantages do you see in the use of planning boards and progress charts? In what types of industries would each be most useful?
5. In what respect is time-and-motion study a control device? Draw up a list of prerequisites to time-and-motion study.
6. "The inspection function is not an exercise of the plant police power." What does this mean? Suppose inspection is exercised as a police power, what difficulties are likely to result?
7. What arguments would you use to convince a production manager that he should install a cost accounting system? How does cost accounting differ from general accounting?
8. Prepare a summary outline of the material found in the production chapters.

PART V

MARKETING

MOTION PICTURE FILMS

FILMS FURNISHED FREE OF CHARGE

*Source: United States Department of Agriculture
Division of Motion Pictures
Washington, D. C.*

- * 1. Co-operative Marketing (2 reels)—Cotton. Grower's bale to gin, to mill, to seaboard.
- * 2. Co-operative Marketing of Dried Prunes (2 reels)—Product, harvesting, drying, and handling.
- * 3. Citrus Fruits in Florida (2 reels)—Handling oranges and grapefruit crops.
- * 4. The Cow Business (2 reels)—The beef industry.
- * 5. Preparation and Marketing of Dressed Poultry (2 reels)—Methods of handling cold-storage poultry.
- * 6. Co-operative Marketing: Livestock (2 reels)—As title indicates.
- § 7. The Golden Fleece (1 reel)—Handling, grading, and co-operative selling of wool.

*Source: American Museum of Natural History
New York, N. Y.*

- † 1. The Land of Cotton (2 reels)—Growing; preparing for market.
- † 2. From Seed to Cloth (2 reels)—Cotton. Growing, picking, ginning, marketing, cloth manufacturing.
- * 3. Our Daily Bread (1 reel)—Growing wheat, processing, and a modern bakery.
- * 4. Magic of the Mountains (2 reels)—Coffee. Cultivating, milling, exporting.

*Source: General Electric Co.
Visual Instruction Service
Schenectady, N. Y.*

- * The Sugar Trail (1 reel)—Product from beets (through exchange).

*Source: Iowa State College
Visual Instruction Service
Ames, Iowa*

- † From Wheat to Bread (1 reel)—From old to modern bakery; to consumer.

RENTALS

*Source: Edited Picture System, Inc.
330 W. 42nd St.
New York, N. Y.*

- † 1. Cotton (1 reel)—Planting, cultivating, preparing for market.
- † 2. Vegetable Gardening (1 reel)—Growing, marketing the common vegetable.
- † 3. From Wheat to Bread (1 reel)—Making bread; primitive means; modern mill; bakery; delivery to consumer.

* Available in both 16 and 35 mm.

† Available only in 16 mm.

§ Available only in 35 mm.

Source: Films of Commerce, Inc.

*35 W. 45th St.
New York, N. Y.*

- † 1. Cane Sugar (2 reels)—Producing, refining of sugar.
† 2. Kindly Fruits of Earth—Cultivating, picking, packing, and shipping import fruits.

Source: Wholesale Films Service, Inc.

*48 Melrose St.
Boston, Mass.*

- † 1. Brazil's Gift (1 reel)—Coffee: from plantation to consumer.
§ 2. Cranberry Industry of Cape Cod (1 reel)—Cultivating, harvesting, and marketing.
§ 3. Meat: From Hoof to Market (1 reel)—Raising cattle and hogs; shipping and marketing.

*Source: C. L. Venard
702 S. Adams St.
Peoria, Ill.*

- ‡ 1. Great Oaks (1 reel)—History of Sears, Roebuck Company.
‡ 2. Hidden Values (2 reels)—Testing laboratory of Sears, Roebuck Company.

*Source: Pinkeny Film Service
Pittsburgh, Pa.*

- § 1. Cranberry Industry of Cape Cod (1 reel)—Cultivating, harvesting, and marketing.
§ 2. Meat: From Hoof to Market (1 reel)—Raising cattle and hogs; shipping and marketing.

† Available only in 16 mm.

§ Available only in 35 mm.

‡ Sound films.

CHAPTER XXI

NATURE AND IMPORTANCE OF MARKETING

NATURE OF MARKETING

Marketing involves all activities required to transfer goods and their ownership from the producers to the users.¹ In the existing economic structure we find the users at one end and the producers at the other, and, in the middle, an intermediate group facilitating and conducting the exchange of goods. The intermediate process required to make all the exchanges between these two major groups of the economic system is known as the *marketing system*.

The chief reason for the existence of the marketing process is that most producers and consumers usually find it impossible to deal on a direct personal basis. In the modern world of extensive specialization the barter basis of exchange is impractical and also undesirable if the existing standards of living are to be maintained. Our present standards of living—the possession of many and varied kinds of goods that we could not make ourselves—are made possible only by a widespread exchange of many types of products. The marketing system is therefore an essential and productive portion of the economic regime.

Marketing operations, as the definition indicates, are of two general kinds, one having to do with the exchange of the title or ownership in goods, the other having to do with the physical transfer or distribution² of the goods. These operations usually go together, but not necessarily so; frequently while goods are being transported a series of exchanges involving their ownership may take place, as may occur in the case of a shipment of wheat taken out of a local elevator in Kansas and destined for Chicago.

¹ The word *user* here includes both consumers and industrial purchasers.

² Distinguish the use of the word in this sense of physical handling from its use in economic theory, where it is used to designate the division of the returns from productive activity among the factors of production.

Within the week required for transportation the bill of lading representing the title or ownership of the wheat may pass several times from one elevator or broker to another before the mill—the final purchaser—gets the title.

Some of those who aid or function in performing these various marketing operations are known as *middlemen*. They are well named because they occupy the gap between producers and users. These several parts of the marketing structure are not, however, absolutely rigid in their interests. People and firms usually find themselves in a dual role. They may be sellers at times and buyers at others. These dual relations make a conflict of interests that complicate the whole marketing structure beyond the simple parts of producer, user, and middleman. Thus marketing is a living, vital problem for study, not a mere historical case.

Markets

The heart of the marketing process is a market. A market may be defined as that process by which buyers and sellers enter and conclude exchange agreements. The goods may or may not be present; the important point is the making of an agreement to exchange the title of the goods. The parties may gather at a central point or in a particular building, but that is not essential, for all of the elements of the transaction may be determined by correspondence. A market, therefore, is not a place or a thing to be seen. It is, instead, the process of arriving at agreements of exchange between buyers and sellers.

A market may be large or small, depending upon the number of buyers and sellers involved in it. The term *local market* implies that the forces at work in the exchanges—the elements influencing the buying and selling—are local in character. The term *national market* includes all of those forces and elements of national extent and influence bearing upon the agreements which buyers and sellers make. The market structure as a whole within the United States is therefore an aggregation of great numbers of local, territorial, and national markets.

Objectives

The essential object of marketing is to exchange goods between the producers and the industrial purchasers or the ultimate

consumers. The actual flow of exchange is not ordinarily so direct. In the case of agricultural goods where production is carried on in many places and where goods must be marketed to consumers who are even more widely scattered, other steps become necessary. The first step is one of concentration of supply. There follows next the dispersion or scattering of this supply to the many sources of demand. The marketing system of these goods is thus characterized by these two broad movements of concentration and dispersion. In a wheat shipment, the wheat goes to the central elevators or markets before it is sold to a miller who, when he has processed it, begins to ship the flour to parts of the same territory from which the wheat was shipped as well as to other parts of the country. The marketing process of manufactured goods, ordinarily more simple and direct, has little need for concentration of many of the materials. Here the scattering of the supply directly or by middlemen is dependent upon whether the manufactured product is for industry or consumers.

Such a brief introduction into the nature of marketing does not adequately indicate its significance in our economic life. Its importance can best be appreciated from a review of the history of marketing.

I M P O R T A N C E O F M A R K E T I N G

The Ancient World

Marketing operations existed in the highly civilized portions of the ancient world, though marketing was less important than in the modern economic order. Production of goods at that time was usually for immediate and personal use only and not for marketing. This sort of economic life is known as *self-sufficient economy*, one in which all wants have to be supplied from a person's own efforts, or that of his slaves or family, as applied to the materials existing in the particular territory. Such an economy narrows the range of goods available for the average person, and does not permit him to use his special skill exclusively in the production of a single kind of goods.

Whatever trade did develop within the limited bounds of the ancient world was largely confined to exchanging the luxuries of

one region for those of another. The average individual of that time received few, if any, of these articles, for most of them could be purchased only by the ruling class. Even these so-called luxuries were often not luxuries in the modern sense; indeed, they were as often as not articles that we take for granted today. For example, such a commonplace thing as pepper was one of the first articles of commerce in the ancient world and was considered a luxury by all those who traded in it.

Trading in the ancient world was very limited, both in numbers benefited and in commodities exchanged. The inadequate transportation facilities were a prime reason for this situation. Perhaps of equal importance was the fact that there was strongly centralized government over only a small part of the world. These two elements vital to marketing operations had yet to be developed before trade could reach great areas and include countless varieties of products.

The Medieval World

By the year 1100 a series of explorations had extended the known parts of the ancient world to the countries surrounding the Mediterranean Sea. Since this territory, together with France and the British Isles, was for the most part the geographical setting of the medieval world the Mediterranean Sea became a transportation route of unexcelled importance. But on land the means of transportation showed no great improvement, and the great bulk of the continents of Europe, Africa, and Asia remained unknown portions of the world. Even much of the known world lacked stable and central governments. While the Mediterranean Sea invited intercourse and trade in greatly increasing amount, the rest of the medieval world forced too great odds upon the trader. Though knowledge of the world had grown, the world still remained largely as localized communities with little exchange of goods between them so the communities remained self-sufficient in the production of things to satisfy wants.

Through the centuries of medieval history continuous improvement was made in both transportation and the stability of governments, trade increasing wherever this was true. Fairs and public markets became characteristic marketing institutions of this period. Because the articles of commerce in this age were neces-

sarily the products of handiwork crafts, there was no very large volume of goods to be marketed. Even though later the domestic system of production added to the volume of goods for marketing, still the amounts continued to be limited to what human power could produce.

At this juncture in the historical picture came the amazing inventions of the steam engine, power loom, and many other machines which revolutionized methods of production and replaced the human factor. This period, the late eighteenth century, known as the Industrial Revolution, dates the beginning of the so-called modern industrial world.

The Modern World

The mechanized processes growing out of the Industrial Revolution enlarged man's capacity to convert raw materials into goods for exchange far beyond the dreams of the handicraft or domestic production systems. This very volume of production, however, called for widespread exchange; only thus could the possible volume be absorbed or the definite advantages of specialization be gained. From these mechanical inventions methods of transportation and communication developed quite as quickly as the production methods; so the way was opened for exchanges with the distant parts of the world. These exchanges resulted in the older nations receiving the raw materials of the new worlds—North and South America—in exchange for the finished products of the old world—Europe.

This two-way flow—raw materials to producers in exchange for finished goods—is at the core of modern economic existence. The forces once set to work have spread like the ripples of a lake where a stone has dropped, covering an ever-increasing area and at the same time involving the exchange of a much greater volume of goods.

If we look to the marketing operations of the United States at an early date and compare them with a recent period, we see plainly what the tremendous growth in exchange has been. In 1850 the per capita volume of exchange in the country approximated \$130 for the year.⁸ In 1929 the figure was approximately

⁸ *Statistical Abstract of the United States*, United States Department of Commerce, 1932, pp. 2, 730.

\$1,515 for the year,⁴ and in 1933 it was about \$780.⁵ This represents an increase of 900 per cent, on the average, in the volume of exchange operations now being conducted as compared with eighty-five years ago.

The same picture of growth, though not to the same extent, is to be found in the foreign trade exchanges of our country. In the period 1791-1800 the total exchanges between the United States and other countries approximated \$2.35 per person in each year.⁶ This may be contrasted with the period of 1923-1931, when the foreign trade exchanges approximated \$64.50 per person annually,⁷ representing an increase of about 2,700 per cent in a century and a quarter.

The expenditure of a consumer's dollar illustrates the magnitude of the marketing system. It is not surprising to find that by far the largest share of each person's dollar is spent for goods that must have been provided by the marketing systems and institutions of the age. In the United States, the consumer's dollar has been found to be divided as follows: rent and house payments, 12.4¢; taxes, dues, medical care, and gifts, 7.1¢; savings, 5.2¢; and the remainder, retail purchases plus services including utilities, laundry, and amusements, 75.3¢.⁸ This division of the consumer's dollar, showing that three-fourths of his expenditures are for retail purchases and services, clearly indicates the importance of middlemen in the fulfillment of the consumers' demands and makes the central position of marketing in the economic order self-evident.

All of the factual statements just reviewed serve to emphasize, as little else can, the tremendous volume of work to be handled from day to day by the marketing system of the modern world. This exchange process is, of course, at the very heart of the modern economic world; without it we should have to return to the days of self-sufficiency. Limitations placed upon this process of exchange by governments and private monopolies may cost

⁴ *Ibid.*, pp. 2, 730, 787, and 791.

⁵ J. F. Pyle, *Marketing Principles* (McGraw-Hill Book Company, rev. ed., 1936), p. 14.

⁶ *Statistical Abstract, op. cit.*, pp. 2, 432.

⁷ *Ibid.*, pp. 2, 432, 730.

⁸ W. C. Mitchell, *Business Cycles* (National Bureau of Economic Research, 1927), p. 147.

heavily, for marketing yields its largest returns when full freedom of trade is permitted. The highest volume of trade can be attained only under such freedom of exchange. History demonstrates this fact.

S U M M A R Y

Marketing occupies an important place in the business world of today because of the dependence of the economic system upon the facilities of exchange maintained by the marketing institutions. This dependence arises especially out of the industrial, territorial, and individual specialization involved in the processes of production. The facilitation of exchange between producers and users is the tremendous task of the marketing structure. The volume of goods exchanged and the number of transactions furnish some picture of the size of the task, but they give little idea of the complexity of the system.

The contrast between the importance of the marketing process in the economic system today and in the ancient world is marked. Not only are thousands engaged today in marketing activities but millions are dependent for their daily bread and butter upon these marketing institutions. So successfully do they fill this role of bringing to us the wants—necessities and luxuries—of life that we are neither aware of the significance nor of the problems of marketing as an economic process.

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P R O B L E M S

1. State your concept of the function to be performed by the marketing system.
2. Describe a "market." In what way can it be described as local or national?
3. What are the main movements evidenced in modern marketing structures? Why?
4. How do you distinguish middlemen from consumers?
5. Indicate several conditions essential to the modern marketing structure.
6. What are the services of the marketing process to this generation?
7. How does the size of the market complicate the economic order? What are the gains?
8. What do the per capita trade figures, apart from volume, tell about the marketing process of the United States?

CHAPTER XXII

FUNCTIONS OF MARKETING

An analysis of the exchange agreements and transactions which constitute marketing reveals that a variety of tasks, called *functions*, are performed. Our immediate purpose is to examine these marketing functions.

In our effort to classify marketing functions it appears at once that some of the work is involved solely with the marketing process. Such functions are known as the *direct functions*, called by some writers the *functions of exchange*. The remaining classes of work, which aid not only in the marketing process but also in other divisions of the economic order, are known as the *indirect functions* of marketing.

The direct marketing functions are buying and selling. The indirect functions, known as *functions of physical supply*, are storage and transportation and communication; those known as functions facilitating exchange are standardization, financing, and risk-bearing.¹

DIRECT FUNCTIONS OF MARKETING

Buying

The first direct function involved in the marketing process is that of buying or assembly. This term includes all the efforts involved in preparing for a market the quantity of products or services that is likely to be purchased. Buying includes the prediction of demand, the ordering of products or services, and the timing of their arrival at the moment when the demand is actually made.

Prediction of Demand.—The first factor in buying is the prediction of consumer demand. This must be decided upon in advance of the actual buying, often months in advance of the time

¹ Some writers include *recording* as another facilitating function.

when the goods must be on hand for sale. A number of matters enter into such a demand prediction. Briefly summarized they are: (1) the extent of purchasing power—that is, the ability to pay as a test of the probability that the buyers will actually purchase goods; (2) the total quantity of the predicted demand, a matter influenced by the extent of the market—local, state-wide, or national; (3) the preferences of consumers in matters of style, habits, and occupations—all important influences upon the prediction of the particular kinds of products consumers will purchase.

Purchasing Power.—The ability to buy is judged by the purchasing power of consumers within a market.² This ability is obviously one of the most important items bearing upon the volume of trade that will take place in that market. Judgment of this factor is not particularly easy, because such judgment must be built upon anticipation of the future.

TABLE VIII
SOURCES OF NATIONAL INCOME*
(In Billions)

Source	1929	1931	1934	1934 Percentage Distribution
Agriculture	\$ 6.1	\$ 4.2	\$ 3.2	6.5
Mining	2.0	1.2	1.0	2.0
Manufacturing	18.0	12.3	10.0	20.4
Service industries				
Transportation—communication	7.5	6.0	4.7	9.6
Light, power, and gas	1.3	1.4	1.1	2.2
Trade	11.3	9.5	7.1	14.4
Finance	8.4	6.2	4.1	8.3
Construction	3.2	1.9	.8	1.6
Personal Service	8.4	6.9	5.4	11.0
Miscellaneous	5.1	4.1	3.2	6.5
Government	6.8	7.1	8.4	17.5
	<hr/> \$78.5	<hr/> \$61.4	<hr/> \$49.4	<hr/> 100.0

* Determined by income paid out. *Survey of Current Business*, August, 1935.

² See Tables VIII, IX, and X for figures bearing on the national capacity

Actual facts pertaining to the ability to buy within a future market period are not easily obtained. Some of the more common sources of information are tax reports of income and property payments, prices, production volume of local products, pay rolls of industry, profits of business concerns in the market area, and volume of bank deposits together with their turnover.

TABLE IX
DISTRIBUTION OF NATIONAL INCOME *

YEAR	TOTAL PER CENT	EMPLOYEES		TOTAL PER CENT	ALL OTHERS			
		Wages	Salary		Agricul- tural	Non-agricul- tural	Property Owners	Business Savings
1909	54.4	38.8%	15.6%	45.6	12.6%	13.6%	14.7%	4.7%
1914	57.4	38.4	18.0	42.6	10.5	14.5	15.8	1.8
1919	55.4	36.1	18.1	44.6	14.3	11.2	12.3	6.8
1924	63.6	41.5	20.3	36.4	8.1	13.0	13.2	2.1
1929	65.1	42.1	21.7	34.9	6.8	10.5	14.9	2.7
1934	67.0			33.0				

* Compiled from *America's Capacity to Consume* (The Brookings Institution, 1934); and *Survey of Current Business*, August, 1935.

TABLE X
FAMILY INCOME BY INCOME CLASSES, 1929 *

INCOME CLASS	FAMILIES		INCOME	
	Number (In Thou- sands)	Per Cent	Amount (Millions)	Per Cent
Up to \$2,000	16,354	59.52	\$18,264	23.68
" to 6,000	9,530	34.64	30,084	39.00
" to 25,000	1,430	5.25	14,019	18.17
Over 25,000	160	.58	14,749	19.15

* Compiled from *America's Capacity to Consume*.

Market Area.—In the prediction of users' demands the extent of the area from which purchasers may be reasonably attracted to the seller must be determined. So, too, must be the competition,

for in every market there are likely to be competitors who will take some of the total group of purchasers. Both of these elements will therefore be extremely important in any judgment as to the total volume of demand that a particular business may expect to receive from a particular market area.

These areas of the market are not closely defined territories or regions in fact, and they may change quickly as purchasers are attracted from one seller to another in different markets. Such changes may be occasioned by advertising directed by the seller in the new market to the purchasers of the old market. Or a fundamental change in transportation conditions may make the new market a center much easier of access. This has happened throughout all rural America in the past two decades with the advent of hard-surfaced roads. Quite as often some important product attracts a purchaser into another market area in which he finds it convenient to make all of his purchases.

Such changes make it apparent that all the businesses within a common market area find it to their mutual interest to maintain their contacts with consumers for all types of products. This logically suggests some joint or co-operative effort to attract and hold consumers to a market. Such attractions by co-operative effort are the usual functions of chambers of commerce, trade and manufacturers associations, neighborhood store associations, and the like.

Habits.—Consumer demands vary greatly, the purchases of no two persons exactly coinciding. However, some buying demands are guided by habit; some people, whether industrial purchasers or ultimate consumers, always like to buy the products that they have been accustomed to use over a period of years. A business that manufactures goods purchased by a large body of such users has a much more certain basis for prediction of consumer demand than have businesses not so fortunately situated. In fact, the great bulk of business cannot be predicted from the habits of buyers.

Styles.—Practically all consumers are strongly influenced by the styling, or the current designing, of the product. It is this one factor alone, in many instances, that makes the consumers desire to purchase. Changes in the appearance and design of products are constantly being made and quite often without reference to



(Courtesy Goodyear Tire and Rubber Co.)

Ingredients, other than rubber and cotton, necessary to the manufacture of tires. The task of raw material assembly is an important one.

Modern business draws raw material from all over the earth. Unloading crude rubber from a steamship.

(Courtesy Goodyear Tire and Rubber Co.)



the success of the existing design or style. This is done because some producer has faith that his design is so attractive that it will become "the" style and displace the present mode. The constantly changing factor of style obviously makes it extremely difficult to predict today what the consumer will purchase tomorrow. Consumption prediction under these circumstances is therefore one of the most difficult phases in all marketing.

Many localities are dependent upon particular types of industry in which the workers regularly consume certain types of goods, such as work clothing or shoes. Here style and habit ordinarily have little influence upon the consumer. For example, in a lumbering district where the occupation and climate demand heavy logging boots, neither the dominant style in men's shoes nor the kind of dress shoe a purchaser might habitually demand would dictate the choice. Occupational factors thus tend to guide consumers' demands in the selection of special classes of products. Any seller must acquaint himself with the strength of this influence and be prepared to recognize it as a potentially important factor in his predictions of what his customers will buy.

Ordering.—The second factor of assembly is that of ordering—reaching the sources of supply, making the actual selection of items, and agreeing upon prices. All three elements involved in this step are of an importance that might not be obvious on their face. The matter of discovering and dealing with the best sources of supply is in itself made difficult because of the great number of places where the materials are found. For example, a wholesale firm in the mercantile trade would have as potential sources of supply all the manufacturers and processors who produce all the items kept in their stock, a tremendous number. For example, there are over 1,300 shoe factories operating in the United States.⁸ What kinds of shoes do they make? What style and quality? Where are they located? It can easily be seen what a large problem is involved in source of supply.

Apart from locating a source of supply there is always the question of what the consumers will demand. Our middleman faces the question of what types, styles, and sizes of shoes to

⁸ *Statistical Abstract of the United States*, United States Department of Commerce, 1932, p. 746.

stock. The answers to these questions, of course, come from experience and study of the demands that consumers have indicated in previous periods within this market—the prediction of demand.

After our middleman has thoroughly gone over the matter of where to purchase shoes and has decided what kinds and amounts of each to order he has yet to settle the question of prices. The various sources of supply will no doubt offer him varied prices. Likewise, the consumers within his market have varied notions as to what prices they can or will pay. This question, then, complicates the ordering, for, though he might have originally been satisfied with the sources of supply he selected, the shoes manufactured by these processors may not be offered at prices which will allow him to meet his consumers' demands. Such a situation would force him to seek out new sources of supply until he discovered factories that were manufacturing the shoes he has selected and at the prices he is prepared to pay.

Timing of Shipment.—The third element of assembly is that of timing the arrival of goods in the hands of the manufacturer or merchant. To continue the illustration of a wholesaler, suppose he had selected and ordered stock from fifty out of 1,300 manufacturers. These fifty manufacturers would probably be scattered geographically, and at a minimum fifty shipments, some large and others small, would be received. Perhaps the wholesaler would want all shipments at once but more probably he would desire some at future dates and would so specify on his orders. His schedule of arrivals must be with regard to the speed with which he succeeds in reselling the items to the retailers. No wholesale firm should permit its stock to fall so low that it must refuse or postpone profitable orders. Neither should it keep a greater supply than is necessary to meet the retailers' seasonal demands, for otherwise funds of the firm will be tied up in stock literally held in storage. And there is no profit in storage beyond the point of being ready instantly to supply its retailers without delay; on the contrary, valuable space is taken up, many times by goods that are deteriorating in value. In most cases, nothing like a year's supply of goods is kept on hand.

The speed and frequency with which a supply of goods is

sold and replaced is spoken of as an *inventory turnover*. By this term we mean that the stock of goods kept by the firm is turned over or replaced so many times within a given period, usually one year. The greater the number of turnovers the smaller the amount of capital tied up in stock. Successful management of the timing of the supply will, among other things, assist in increasing turnover, thereby economizing capital used in the business. And economy of capital will lead to greater profits for the concern. Where a firm is taking the same margin on its goods as its competitor but with twice the turnover, it doubles the return on the capital invested. That is both profitable and efficient marketing.

Most of the elements involved in the work of assembly turn largely upon judgment. Yet it is apparent that each of these judgments bears most importantly upon the smooth working and efficient handling of goods as they are marketed. The function of assembly has more to do, therefore, with the success or failure of a marketing division in a business than is at first apparent.

Selling

A most essential part of marketing is the direct function of selling.⁴ This involves two phases: first, creation of demand—sales promotion—and second, the completion of the sale—salesmanship. The function of selling has assumed major importance in the modern economic system, since modern production methods have enabled the producer to turn out greatly increased quantities of goods. These products must be sold or the exchange system will stagnate. *Where* to find the market for all the commodities produced has now become a more important question than *how* to produce. No longer can the seller turn to newly discovered countries for a market; with the last frontier gone, he must develop the existing markets, even though they are severely restricted by consumers' purchasing power. No matter how much consumers desire to take all that our industrial system can produce, they cannot normally do so at prices that would pay all producers a profit. Thus the competition by individual producers to sell to their share

* "Selling is the personal or impersonal process of assisting and/or persuading a prospective customer to buy a commodity or a service or to act upon an idea which has commercial significance to the seller."—NATIONAL ASSOCIATION TEACHERS OF MARKETING.

or more than their share of buyers has become an intense problem that elevates the selling operations of business to a position of dominating importance.

In fact, the function of selling becomes more and more important as the competition between producers of the same products grows more intense. Except for the necessities of life, buyers may be conscious only of general desires; or while they recognize that many products are desirable, they may evince but little interest, because they do not fully understand the product or its uses. If the consumer were left to himself, most of his purchasing would be dictated by habit and he would buy only what he thought he could afford. Demand creation, therefore, becomes a vital step in modern selling.

Demand Creation.—Without some stimulant most of us would never go out of our way to familiarize ourselves with the nature of new products or what they could do for us. It is probably true, too, that without some compelling force most of us would not strive to increase our purchasing power. But when new products are forced to our attention and we understand what benefits or enjoyment they might bring us, we may be spurred to increase our incomes in order to satisfy the newly created desires.

To reach consumers and arouse their interest to the point of wishing to purchase, the sales policy may be direct, or indirect, or both. Consumers are reached directly by salesmen or indirectly by advertising and displaying the products. A great deal of the selling procedure has shifted in late years from the direct to the indirect devices. This shift may be briefly indicated by the figures representing display advertising—an outlay of at least a billion dollars⁵ in 1929 in contrast to 250 million in 1914. Advertising in all forms for 1936 represented an estimated outlay of 1.8 billion dollars,⁶ including about a billion dollars for display advertising although the sales volume in 1936 was less than in 1929.

The reasons for the importance of demand creation will become more real if you will test them upon yourself. Recall some

⁵ *Commerce Yearbook*, United States Department of Commerce, 1930, p. 542; others estimate all advertising in 1929 totaled two billion dollars, A. T. Falk, *Bulletin, Bureau of Research and Education* (Advertising Federation of America, 1931), Series 1.

⁶ K. M. Goode, *Modern Advertising* (Halcyon House, 1937), p. 398.

of the products with which you were not familiar two years ago and study the way in which they were brought to your attention. It probably is safe to say that only in a few instances did you make the discovery of the product yourself. Only by some direct word or indirect planting of an idea in your mind by the producer or middleman were you made conscious of the existence of the product, became interested in it, and desired it.

Salesmanship.—After a consumer is interested in the general idea of the product there still remains the matter of inducing him to contract for particular purchases. This, as has been indicated, is a second phase of selling and is the final test of sales management. Demand creation is an aid only to the ultimate result: the seller's contract. Before any purchase has actually been concluded, the consumer has doubtless displayed a certain amount of indecision.

It is the role of actual selling—salesmanship—to overcome this indecision and to complete a sales contract. This indecision on the part of the purchaser is sometimes fostered by the fact that the seller often only partially understands the purchaser's needs and is therefore unable to offer wares that will completely satisfy them. When a sale is concluded it is essential that the purchaser be made to feel that his wants are understood and that he has been shown or informed about all of the available products that might minister to them. This requires a great deal of knowledge on the part of the seller; it requires more than facts about his own particular product. It is important that the seller be able to distinguish between and to compare his products with competing ones. The purchaser will feel less compelled to shop comparatively if the seller seems well informed and can make accurate comparisons between the various products in the market and their applications to the consumer's needs.

The seller should not divulge information of this type unless he is making a definite effort to conclude the contract. In itself the closing of a sale involves psychological as well as argumentative persuasion. It is an essential element to all selling that a customer be brought to the point of closing the sales contract in the shortest possible time. Thus the seller is assured of his particular purchaser, and his selling efforts, once expended, need not be dupli-

cated. The actual selling often hinges upon auxiliary services or elements to the contract—packaging, shipping, or purchasing on credit.

While we may not say that any one auxiliary element is more important than another, favorable credit terms, an important American practice in sales contracts, ranks high in importance. It has been estimated that more than 80 per cent of the sales volume moving into the ultimate consumer's hands is based upon credit extension of payment. The terms upon which the credit is offered are very frequently the deciding factor as to which seller is awarded a contract.

Successful selling is not always, therefore, a matter of product alone; as often it may involve creating a demand and persuading the purchaser to make a contract to buy.

INDIRECT FUNCTIONS OF MARKETING

Physical Supply Functions

The carrying of goods to markets, the communication of market information and contracts, and the storing of goods ready for a buyer are the functions of physical supply. These functions contribute services indirectly to the buyer and seller but are obviously vital to their transaction.

Storage.—A third function of the marketing process is that of storage, a service by which goods produced in one period are held for use at a later time. The reasons for this function in the marketing structure are numerous. Some products, though seasonally produced, are demanded regularly throughout the year for consumption. For example, wheat in the United States, which is harvested for the most part in the months from July to September, is used continuously throughout the year. On the other hand, many products regularly produced over the year are required by the purchasers only in certain seasons. Many plants engaged in making woolen blankets, holiday goods, or agricultural implements keep a regular production schedule over the year, but find their sales period crowded into a few weeks or months.

A further reason for the storage function is the holding of goods for speculative price changes. Not infrequently a market

condition may develop where immediate supply so far outruns demand that it lowers current prices greatly. This condition may create an opportunity for the seller, by holding some of the supply off the market, to dispose of his holdings at an increased price as the demand continues for a diminishing supply. This is done every day in all lines of trade. Storage also occurs when large-scale purchases and shipments necessitate holding the goods for some time while concentrating them for shipment. Again, a number of conditioning, grading, or packaging services may be performed in conjunction with the storage period. All of these reasons furnish ample evidence of the importance of the storage function in marketing. ..

The most characteristic fact of modern production is that articles are prepared during a period considerably in advance of purchase; the service of making such goods available to the consumer through storage permeates the marketing process today. To sum up, the function of storage is to preserve supply, to minimize the risk of delay in production, and to permit an even flow of goods into marketing channels.

Storage is facilitated by means of warehousing, cold storage or refrigeration, and ground or lot space. The warehouse is perhaps the most common form of storage facility, and is operated both by the individual merchants and producers and by public warehouse concerns. In 1927 there were about four thousand public warehouses,⁷ renting a quarter of a billion square feet of space. In 1933 there were more than twenty-five hundred doing a rental business of more than seventy-two million dollars. These warehouses are usually fireproof buildings equipped with conveyors, trucks, and portable stacking and piling devices. Many have refrigeration space, for this is an increasingly important storage field.

Frozen perishable food products offer a typical illustration of what storage may mean to marketing. It was not so many years ago, for example, that the strawberry season was confined to three months of the summer. Today, thanks to refrigeration and storage services, strawberries are made available in retail outlets throughout the year. Other examples are found in the citrus

⁷ *The Market Data Book* (G. D. Crain, Jr., Chicago, Ill., 1927), p. 447.

fruit, butter, and fresh meat industries. The whole of the meat-packing industry, which now holds the position of the second major processing industry of the United States,⁸ is based on refrigeration and storage services.

Apart from the regular facilities of storage, a new field of service has been developed in the distribution service operated by many warehouses. These services usually consist of storage and shipping upon order, reshipping in smaller quantities from car-load lots, and sometimes selling from storage. The latter is a common service in the tobacco, coffee, and wool warehousing field. The two former developments have been the outgrowth of the "hand-to-mouth" policy of buying that has grown in the distribution field since the World War.

Shipping goods upon the manufacturer's order out of the quantity stored gives the manufacturer the facilities enjoyed by the wholesaler; this facility has been of distinct importance in efforts to market directly to the retailer. "Pool" cars in which warehouses ship less-than-carload lots of several shippers as a carload have become a regular service of warehouses in the larger traffic centers. This is another sign of the constant search for ways in which to reduce distribution costs.

Transportation and Communication.—It is self-evident in the marketing exchanges that transportation⁹ is a most vital facilitating factor. Communication is also vital to marketing; it conveys information which influences the judgments entering the exchange agreements, and it often transmits complete sale agreements.¹⁰ Both transportation and communication factors are basic elements in the development of large-scale marketing, and large-scale marketing, in turn, makes possible a large-scale production system. Moreover, the efficiency and speed with which these facilitating factors function are essential elements of the cost of marketing transactions.

⁸ *Statistical Abstract of the United States*, 1936, p. 738.

⁹ Transportation is one of the four most important industries in the United States. Railroads, water shipping, trucks, and airplanes represent an investment of more than \$32,000,000,000.

¹⁰ The communication systems of the United States have more than \$5,000,000,000 invested and employ more than 300,000 workers.

Effects on Risk.—The effect of transportation and communication on the risk borne by merchants is twofold: first, a reduction of risk by reason of the speed given to the exchange of information and products; second, an increase of risk by the extension of market areas. This extension of a market area increases risk because it includes so many more producers, consumers, and middlemen. True, all parties are under the influence of the same forces, but it becomes more difficult to gather the correct information and disperse it quickly to all of the persons concerned in anything like an equal time.

Some particular risks to which transportation and communication are related are those of price and style. Since markets are now many times more extensive than under any production regime before the modern industrial system, and since prices are influenced by factors over a much wider market area, a merchant's judgment of a correct price is made more complicated. The moment a price is set speed of transportation and communication may make new factors of supply or demand effective. These new conditions may require another price to be set if consumers are to be attracted.

The rapidity with which style changes can be introduced into all parts of the market, however remote, is of great importance. Constant improvements in communication, which result in spreading information as to more recent changes in styles, consistently make for increasing risk to the merchant. Scarcely has a merchant purchased goods of the latest style before consumers demand a newer style about which they have only just learned through one of the communication mediums—newspaper, magazine, moving picture, or radio.

Shipping Costs.—A most important influence bearing on the expense of marketing is that of freight rates. Likewise, these freight rates have vital significance in shaping the marketing structure in any field of business and in determining the market area of each field.

The nation's average yearly freight bill for shipments by railways is more than four billion dollars,¹¹ while the total income of all transportation firms in the United States is estimated at

¹¹ *Statistical Abstract of the United States, 1935*, p. 370.

nearly six billion dollars a year. This is about 12½ cents in every dollar of retail sales.

The freight rate structure of the railways is an exceptionally complicated matter. Many rate schedules are made in order to allow established market centers to continue serving their old market areas. On the other hand, freight rate changes in many cases may make it impossible for manufacturers or wholesalers once reaching a market to continue to do so with the same ease. A change may establish a difference in favor of a new group of wholesalers formerly unable to reach the same market area because of higher freight costs from their location into the market area. Locations and market areas may easily be destroyed by slight changes in existing freight rate structure, or the changes brought by truck transportation—a cheaper and more flexible form.

Shipping Changes.—The influence of motor truck transportation on rate structure, market areas, and speed of shipments has been extensive since 1920. This type of transportation, as well as airplane transportation, has injected a new competitive factor for the railroads. The very ease with which trucking can be adapted to small shipments, large shipments, urban shipping, and country shipping has created a most flexible form of transportation. The door-to-door nature of such transportation and the frequency with which schedules can be maintained has attracted shipping to this form in considerable amounts.¹² Until the last five years most of the trucking industry was unregulated, but most states have now undertaken various controls in the way of special licenses, bonds, and control of rates and service.

Transportation and communication are clearly of unusual importance in modern marketing. Their functions extend exchange processes, permit the gains of specialization to be realized, contribute both to increasing and to decreasing risk factors, and likewise become a major cost in marketing operations.

Facilitating Functions

Several of the marketing functions are accomplished with the aid of business institutions serving a broader scope than market-

¹² The truck shipping amounts to about 10 to 15 per cent of the freight shipments for the country. See p. 484.

ing alone. These services are recognized in marketing, however, as *facilitating* functions.

Standardization.—A facilitating marketing function closely related to buying and selling is that of standardization—the classification of commodities and articles by grades and by uniform packages. Grading is used because of the convenience with which sales can be made by description and sample. Without grades—that is to say, without different specifications of quality and size—sales would depend upon the buyer's first inspecting the goods he would receive under his contract. This might mean either actually shipping the goods to the buyer for approval or the buyer's making a trip to the warehouse to see whether the articles were satisfactory for his purpose. With grades, on the other hand, the buyer may purchase a known grade that meets his purpose and be assured he is getting what he ordered.

Standardization is closely related to lowered costs of production.¹⁸ Without uniformity the costs of production must necessarily increase with consequent loss of the economies to consumers. Standardization effects further economies in that it simplifies the proceedings of recording and accounting.

From the producer's point of view standardization usually insures premium prices for extra quality goods. Without standardization the producer is invariably asked to take a price representing an average type of goods, for the buyer makes an allowance in his offered price for the varied degrees of quality that he will receive in ungraded goods or articles.

Brands and Trade-Marks.—Brands and trade-marks are a conspicuous feature of marketing operations today. The most important thing, however, to the successful use of a brand or trademark is a standard or uniform article. It is upon this basis that appeal is made to the customer. When he recognizes a brand or a trade-mark the customer is assured of the same quality or grade that he received before.

Brands and trade-marks are identification tags publicized by advertising. A standardized and branded product is essential to successful national advertising. The amount of national ad-

¹⁸ See chapter on characteristics of modern production, p. 304.

vertising in the United States on products carrying brands or trade-marks annually runs beyond four hundred million dollars.¹⁴ Such an expenditure would be futile unless the customer was assured of constant quality by the producer's careful grading and the maintenance of uniformity. Without such an assurance, the buyer is forced to search for the product of his required quality whenever he desires to make a purchase.

Finance.—In all of the marketing operations an auxiliary element—finance—is constantly necessary to the flow of goods. All of our discussions of the marketing exchanges have necessarily implied that someone throughout the process has been the owner of the goods. This ownership requires payment or arrangements for payment to the seller.

Apart from his initial outlay for fixtures and equipment the middleman must finance current operation. Here two pressures are regularly exerted upon him: first, customers ask to postpone payment to a later date; second, inventory needs vary widely with the seasonal change in buying demand. Under such conditions part of the capital to finance marketing operations needs to be permanently available to the business while another portion is needed for temporary periods. The ease with which this auxiliary element—finance—can be obtained naturally has great bearing upon the volume of exchanges.

The channels through which money is made available to the middlemen are the commercial banking and investment banking systems. The latter system supplies the permanently required capital; the commercial banking system supplies the temporary capital.

It has been frequently stated that 75 to 90 per cent of all sales in the United States are made on the basis of credit payment.¹⁵ This statement means that the financial institutions, directly or indirectly, facilitate nine out of ten transactions in the country. In most instances, the financial assistance does not go directly to the customer but to the middleman who then, as a part of his service, extends credit to the buyer. Of course the credit

¹⁴ G. D. Crain, Jr., *op. cit.*, p. 29.

¹⁵ H. H. Maynard, W. C. Weidler, and T. N. Beckman, *Principles of Marketing* (The Ronald Press Company, 1927), p. 614; J. F. Pyle, *op. cit.*, pp. 516-517.

could be granted directly to the purchaser, as it is in the instance of the finance companies' advance loans upon car and furniture purchases. Often, too, a retailer may supply his capital from bank loans so as to pay the preceding middleman at once.

In many fields the wholesaler has become as important for his financial assistance to retail outlets as for his service as a distributive or assembling agency. Often the wholesaler extends credit for a length of time sufficient to permit the retailer to receive the goods, sell them to the consumer on credit, collect from the consumer, and then pay the wholesaler his bill for them.

The marketing structure relies upon the commercial bank for its regular financial assistance more largely than upon any other one source, for the character of loans made by the commercial bank is especially adaptable to marketing operations. The security for these loans is the goods which are being exchanged. That the loans are usually needed for only short periods of time is a fact equally important to the lending policy of the commercial bank.

The importance of finance to marketing has been definitely stressed within the past fifteen years in the development of installment sales financing. This form of assistance has been peculiarly effective in the consumers' market and has even made noticeable headway in the market for capital goods. Installment sales financing will, no doubt, be of growing importance.

Risk Bearing.—The risks to be borne in the course of marketing operations are many and are one of the most conspicuous services performed by merchants. First in importance is the risk of destruction of the goods by fire, flood, or similar disaster, together with losses occasioned by accident in carriage and by theft. Fortunately, all of these risks can be covered by insurance. A second general risk is involved in the extension of credit to the purchaser. Since bad debts are a known factor of loss in all businesses extending credit, they are a regular source of risk in the marketing system. A third general class of risk is that of market conditions, including such factors as competition, government regulations, and the movement of prices. These factors are risks in so far as some change caused by them is created while the middleman is still operating under conditions which he had anticipated would be in existence.

An insurance policy is a device whereby one who is subject to the risk may purchase a contract for its assumption. The insured party pays premiums to the company, which premiums are used primarily to create reserve funds, or invested assets, from which losses can be paid. The premiums are based upon a mathematical computation of the average unit of loss determined from past records.

Insurance companies become experts in their field in the meeting of definable risks. They are another sample of the process of specialization in our modern business structure. Such insurance concerns become important factors in the investment banking system, as previously pointed out, because the reserve funds are invested in the capital markets of the world—another illustration of interdependence found in the business structure.

Credit Risks.—It is almost impossible to shift to special institutions the risk incurred in the extension of credit. Credit risks are matters that every business must assume. Each case must be judged by the credit manager, whose decision will be based upon information that is as accurate as possible. Much of the procedure and policy of the credit manager was discussed in the section on finance. At this point credit risks are again emphasized as one of the risks in the marketing process.

Competition.—Competition, as it exists under the present economic system, is another type of risk. The particular influence that it may have in any one case is something of an unknown factor. But the pressure of such risks is accepted as the best incentive to long-run efficiency in the economic order. At the expense, perhaps, of an individual business this competitive process should bring, according to orthodox economic theory, the greatest social advantage. Competition is therefore expected to be an ever-present element of risk under our economic order.

Government Regulation.—Government regulation, which one might not ordinarily think of as a risk, creates a change from an unregulated market condition to a regulated one, and this is sure to mean a shifting of risk. The constant question of further extension of government regulation into new fields keeps this factor of risk ever present.

Price Changes.—The movement of prices is, of course, at the heart of marketing risk. There is no way, for the most part, in which this risk can be avoided or shifted. Only by study so thorough that judgments will not be based upon inadequate facts can there be some hope of controlling this risk. Certainly it cannot be avoided.

In some fields where there are established exchange markets the risk of price change may be shifted to speculators through these markets, freeing a business from the risk of price variation in its raw material. A common and valuable illustration of this situation is the milling industry, which is open to "hedging" operations in the grain exchanges.¹⁶ Hedging insures the mills against loss due to the market movements of wheat, the risk being taken by the speculators. These speculators are compensated by the fact that the prices move in favor of their position sometimes and that they profit quite as frequently, therefore, as they lose. This means, of course, that the mill at various times has lost the chance to make profits by a change in the value of wheat, but the

¹⁶ A sample transaction may be illustrated if it is assumed that a mill has need of 10,000 bushels of wheat now selling at \$1.00. It wishes to be protected against a shift in wheat prices downward which may cause flour to fall in price also, so that it would lose on the wheat purchased at \$1.00. We may set up the transactions as follows:

	PURCHASE	SALE
1. Transaction in September		
Cash wheat *.....	10,000 bu. @ \$1.00	
Future contract wheat †		Dec., 10,000 bu. @ \$1.00 (without account of carrying charges)
2. Transaction in October		
Cash flour		10,000 bu. in flour on basis of current wheat price @ 92¢
Future contract wheat.....	Dec., 10,000 bu. @ 92¢	

* Cash wheat is a market for immediate delivery of wheat upon payment of the price.

† Future contract wheat is a market for delivery of wheat at the time *in the future* named in the contract (here Dec.) at the price named. Such contracts may be both sold and purchased.

The two transactions in futures are now canceled against each other, making a gain of 8 cents per bushel. In the flour made of \$1.00 wheat but sold at 92 cents there is a loss of 8 cents a bu. Thus the mill receives its milling profit but has neither lost nor gained in the movements of wheat prices. Some speculator holding the December futures contract has lost in this transaction.

mill has been quite willing to relinquish a possible profit in order to be protected against an equally possible loss and to know in advance the exact cost of the raw material entering the flour. It should be noted that this risk of price changes cannot be eliminated; at best it can only be shifted to others.

Under normal competitive conditions prices in the marketing system leave business very much to the mercy of unprotected factors; in fact no business is actually in control of its prices. Many firms, of course, set their so-called "list prices," yet the quantity of goods which the market will actually absorb at these prices is a factor that they cannot control. Business is therefore constantly engaged in hunting the proper prices at which all goods produced may be sold to the consumer with the greatest profit. But many businessmen differ in their judgment of correct price and set a different figure from that of their competitors. This makes for confusion and aggravates the difficulty under which all business has to work in seeking to set the price that will dispose of the supply.

We have thus seen that the many risks growing out of the marketing process are valid reasons for the uncertainty of profits in an individual business. Although there are devices by which some risks may be shifted, a greater number remain. These cannot be completely eliminated; nevertheless, they can be effectively met by sound business judgments.

S U M M A R Y

For the sake of study the marketing process may be classified into functions comprising two broad general groups: direct and indirect. Buying and selling are the direct functions of marketing; storage, transportation and communication, standardization, financing, and risk bearing are the indirect functions.

Buying as a marketing function nowadays assumes great significance because of the time factor between production and sale, the necessity of selecting stocks of goods prior to actual sale, and the variabilities of price, purchasing power, and style preference of the purchasers. These are the major risks assumed by the manufacturer and the merchant in the marketing process. Selling is regarded as having two phases, demand creation and salesman--

ship. Demand creation is now viewed as very important because of the intense competition between firms, products, and ideas. In this field advertising plays a noteworthy role. Even though it is wasteful in some degree, the influence it exerts permits the system to reap the benefits of large-scale production. The role of salesmanship is more obvious.

Each of the indirect functions of marketing contributes in its special way to the completion of the marketing process. These functions are integral parts of the marketing structure and are treated as indirect functions because they are not exclusively engaged in the marketing process but facilitate production and other economic processes as well.

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PROBLEMS

1. Explain the elements involved in assembly and in selling functions. How are they related?
2. Indicate the elements involved in assembly. How have transportation and communication developments influenced this marketing function?
3. How can you justify the distinction made between direct and indirect marketing functions?
4. Just what gains result from standardization in the marketing process?
5. Is storage a function of decreasing importance? Cite evidence for your conclusion.
6. "The necessary result of modern marketing is higher costs to the consumer." Explain your view of the statement.
7. Why is not the direct marketing to consumers always the best and cheapest?
8. What makes selling so important to the marketing system? What is its relationship to the production phase of business?
9. How would you describe "demand creation"? Is it important if a consumer has no further purchasing funds?
10. How can finance be anything but very incidental in marketing?
11. Explain wherein speed and continuity of transportation touch marketing, finance, or production functions.
12. Why is price such an important risk in marketing? How can you view it as a risk when the middlemen set their own price?
13. How are price risks affected by futures contracts? Why not follow this process for all marketing operations?
14. "The high freight bill for marketing operations in the United States is not justified." What services do we receive for this bill? Do we get reductions in bills of other kinds?

CHAPTER XXIII

MARKETING INSTITUTIONS

Middlemen

Those institutions which occupy the central position between producer and user and which perform a great share of the marketing process are called *middlemen*. Their chief function is to transfer the title of goods from the producer to the user and to render certain marketing services. Middlemen are divided into two classes: merchants and agent middlemen. The distinction between the two turns around the ownership of the goods and the consequent risks which accompany title. It is the merchant who assumes the ownership and risks, while the agent middlemen act only for the account and risk of others.

Merchants

Institutions for the distribution of goods are known as *merchants*. The merchant ordinarily assumes not only ownership but also physical possession of the goods in which he is dealing. In general, the service of the merchant is to secure sources of supply, combine small lots of goods, or break up large lots for distribution into the markets being served.

Merchants—and the term covers both wholesalers and retailers—constitute by far the most numerous group in the marketing system. They receive their compensation, if any, from whatever profit they derive from a price markup after all expenses are paid. As was pointed out in Chapter XXII, this profit does not necessarily follow. All the marketing risks must be judged carefully and accurately, or the misjudgment of one factor will be so costly, perhaps, as to cancel out all gains. Prices, as we have said, are made in markets ordinarily beyond the control of any one merchant, so that one of the most important risks is the most difficult to evaluate. Most of our modern conveniences are made

possible through the facilities the merchants maintain and because of the risks they assume.

Wholesalers

At the heart of the marketing process is the work of concentrating supplies of goods out of small lots and of dispersing small quantities of goods from large lots. At an intermediate station between the local agency of dispersion and the producers stand the wholesalers, specialists in buying and assembling goods. The extent of modern market areas has made it desirable, as a rule, for the local merchant to shift the making of broad contacts in production to the wholesaler, leaving him free to concentrate his efforts on direct dealing with or selling to the user. Likewise the producer desires to center his efforts on his production problems so that he welcomes the wholesaler's assistance in distribution. These are not the only functions, of course, which the wholesaler performs, but they indicate his key position in the marketing structure.

Wholesalers undertake to tap many sources of supply, and to buy large amounts of goods in many lines over a wide range of qualities, sizes, and styles. These they then split into smaller lots on orders from retailers. The wholesaler makes it possible for the retailer to enjoy the economies of carload shipments to central points, of easily accessible storage centers, and of smaller inventories.

Classification of Wholesalers.—A great variety of wholesale institutions has developed to meet the needs of the market structure. We can classify these wholesalers on several different bases: (1) territory, (2) line of merchandise, (3) methods of business, and (4) ownership.

Some wholesalers deal in small and limited market areas, while others do business in many widely scattered markets; thus we regard some as local wholesalers, others as sectional, and still others as national. The local wholesaler naturally is much closer to the retailers he serves and to general market demands; he can give prompter service, and he is in a position to supervise his business closely. It is said that manufacturers with national brands

as well as the sellers of unbranded goods both prefer the local wholesaler.¹

Wholesalers may carry a general line of goods in various types such as dry goods, hardware, and notions, or they may confine themselves to one of these types of goods, as hardware. Further specialization may lead to limited lines or to specialist wholesalers such as coffee and spice dealers, or paint wholesalers.²

Wholesalers may adopt widely different methods of doing business. They may elect to do only cash-and-carry business,³ to deal as exclusive agents for products, or to act as distributing warehouses for other selling agencies. Whatever he may elect on other policies, the typical general wholesaler, however, extends credit to the retailer as a part of his service.

The wholesalers proper are usually independently owned establishments. Whether they are owned by chain systems, co-operatives, or manufacturers or whether they are independent is a basis for further distinction of wholesaler types.

The Bureau of Census uses the following classification in its reports, which is not an accurate one for marketing analysis because it mixes functional with ownership types.⁴

I. Wholesalers proper

- A. Wholesale merchants
- B. Exporters
- C. Importers
- D. Limited function wholesaler

II. Manufacturer's sales branches

III. Bulk tank stations

IV. Chain-store warehouses

V. Assemblers and country buyers

- A. Assemblers of farm products
- B. Co-operatives
- C. Cream stations
- D. Elevators

¹ J. F. Pyle, *op. cit.*, p. 133.

² In 1933, according to the census, there were 3,380 limited-line wholesale firms, in contrast to the 2,292 in 1929.

³ The census in 1929 showed 2,756 such firms doing a cash-and-carry wholesale business.

⁴ See the suggested classification given in J. F. Pyle, *op. cit.*, p. 129.

Services of the Wholesaler.—It is as a buyer and as a reservoir that the wholesaler performs his most conspicuous services for the retailer. To take an example: there are more than 9,000 manufacturers of drugs and sundries, and the average retail druggist stocks about 10,000 items. It is evident that the retailer cannot give time to ordering the products of 9,000 suppliers. Instead he must rely on a wholesaler who makes a business of assembly and averages the costs over the thousands of items he handles for hundreds of retailers.

In addition the wholesaler commonly sorts and grades material. This is particularly true of those in the field of agricultural products, notably eggs, poultry, and grain. Many wholesalers give the retailer selling aids in the form of store layout, displays, demonstrations and salesmanship schools. Often they give some accounting advice and suggestions on credit and collection procedure.

A most important help given the retailer by the wholesaler is the extension of credit. The majority of wholesalers give credit for 70 per cent or more of the total sales (Table XI). Wholesalers dealing in tires, dry goods and apparel, radios, house furnishings, hardware, coal, paper, and textiles are notable for their exceptionally large credit grants. Automobiles and electric refrigerators show low percentages because these two fields are usually financed through the finance or discount companies.

Importance of the Wholesaler.—The various wholesale institutions, exclusive of agents in wholesaling, numbered about 150,000 in 1929, when they handled a business volume of approximately fifty-four billion dollars. The number of firms decreased slightly by 1933, but the business volume dropped sharply to around twenty-six billion dollars. In 1936 it was estimated to have been nearly forty-five billion dollars.

It is obvious, as shown in Table XIII, that the wholesale institutions handled about 55 per cent of the goods and materials going either into the retail channels or into the hands of manufacturers. This is fair evidence of the reliance placed on the wholesale institutions as assemblers of goods. Both Tables XII and XIII give some interesting figures on these points.

In 1933 the wholesale institutions of the country did 23.5 per cent of their total business in grocery and food products; 12

TABLE XI

CREDIT SALES IN THE WHOLESALE FIELD IN THE UNITED STATES, 1929 *

Kind of Business	Number of Establishments	Net Sales	Per Cent of Credit Sales
Automobiles and other vehicles	743	\$1,226,346,751	3.37
Tires and tubes	655	386,603,407	87.34
Drugs and drug sundries (general line)	638	575,099,513	72.10
Dry goods and apparel	10,518	5,949,916,877	86.30
Piece goods	2,696	2,624,280,838	90.35
Electrical goods (including appliances)	1,901	1,363,595,815	88.52
Radios and radio equipment	806	491,621,311	84.36
Refrigerators (electric)	172	104,202,238	47.32
Cotton	5,234	3,061,609,905	5.78
Grain	12,245	4,001,105,461	12.09
Meats and meat products	3,605	3,102,286,136	68.30
Furniture	1,146	344,630,426	74.59
House furnishings	1,653	591,179,409	82.02
General merchandise	370	596,065,896	66.61
Groceries (general line)	6,900	5,203,417,138	45.85
Hardware (general line)	1,227	754,593,635	84.16
Jewelry	1,925	450,088,560	73.75
Lumber and building materials	5,513	2,144,052,240	73.25
Commercial equipment and supplies	1,804	250,929,433	66.25
Farm machinery and equipment	560	385,838,429	78.44
Manufacturing, mining, and drilling machinery, equipment, and supplies	6,142	1,648,879,563	79.93
Metals and minerals (except petroleum and scrap)	3,620	5,600,700,719	79.14
Coal	1,343	1,160,290,340	82.44
Paper and paper products (general)	1,568	679,013,910	80.04
Paper and paper products (specialty)	584	307,812,990	79.86
Stationery and stationery supplies	719	113,567,706	72.48
Petroleum and petroleum products	23,008	3,365,662,531	41.23
Plumbing and heating equipment and supplies	2,786	810,666,923	77.28
Heating equipment and supplies	635	117,921,101	54.46
Tobacco and tobacco products	2,016	1,691,172,877	78.35
Books, periodicals, and newspapers	636	203,040,817	61.94
Textiles and textile materials (other than dry goods)	1,299	831,883,779	83.18

* Compiled from *Wholesale Distribution*, United States Department of Commerce, Bureau of Census, 1930, p. 178.

per cent of the total in farm products used as raw materials; 10 per cent in farm products as consumers' goods; 7.2 per cent in petroleum products, and 7 per cent in dry goods. In the same year these institutions employed over a million workers and paid 1.6 billion dollars in salaries, wages, and commissions. As an institution wholesaling is obviously important to the country and to the marketing structure.

TABLE XII
VOLUME OF BUSINESS—WHOLESALE INSTITUTIONS *

KINDS	NUMBER OF ESTABLISHMENTS			NET SALES		
	1929	1933	Per Cent Change	1929	1933	Per Cent Change
Total Wholesalers proper	161,266	150,285	—3.3	\$54,694,108,000	\$25,529,504,000	—53.6
Manufacturers' sales branches	79,784	82,844	+3.8	29,288,220,000	12,959,914,000	—55.8
Bulk tank stations	17,086	16,842	—1.4	16,335,917,000	7,496,226,000	—54.1
Chain-store warehouses	19,611	26,176	+33.5	2,390,213,000	1,884,644,000	—21.2
Assemblers and country buyers	559	462	—17.4	1,929,681,000	1,431,563,000	—25.8
	34,226	23,961	—30.0	4,749,382,000	1,756,903,000	—63.0

* Compiled from U. S. Summary, *Census of American Business*, 1934.

TABLE XIII
COMPARATIVE VOLUMES—WHOLESALE'S, RETAILERS', MANUFACTURERS' COST OF MATERIALS *
(Figures in Billions)

Year	Wholesalers	Retailers	Cost of Manufacturers' Goods
1929	\$54,694	\$49,114	\$38,178
1933	25,529	25,037	16,821
1936	45,000 †	47,000 †	36,000 †

* Compiled from *Statistical Abstract of the United States*, 1935; *Census of American Business*, 1934; *Census, Retail Distribution*, 1933, and *Dun & Bradstreet Monthly Review*, Dec., 1936, p. 17.

† Estimated.

Location of Wholesale Concerns.—The problem of locating a particular concern in the wholesale field is one of territory and of the site within a given city. Since the questions to be considered

for a location within a city are similar to those which pertain to the location of an industrial establishment, the reader is referred to the discussion which precedes in Chapter XIX. The determination of the territory in which to locate is substantially a question of general market analysis. A selection of the most favorable territory is a matter of judgment based on comparative showings between several territories as to the various business factors—markets, labor, finance, transportation, legal organization, and government regulation.

Due to a concentration of both population and manufacturing, we find such a high degree of concentration of the total wholesale business volume in a few States that two-thirds of the 1933 volume was produced by firms in only seven States.⁵ Yet this general concentration of all wholesale volume will be of a minor importance as compared with the facts relating to the particular goods when a location is selected. In the case of citrus fruits, for example, we find production concentrated in substantially two or possibly three States, representing in 1933 a crop value of seventy-two million dollars. A wholesale business designed to service the citrus producers in the concentration of their crop must therefore go to the areas of production. But the sale of these fruits in the national market requires some dispersing organization which reaches literally thousands of local markets. It is obvious that the largest food markets are in the centers of population, but all the country will use citrus fruit to some degree if a dispersing agency is created. Thus, while the wholesale institutions serving the producers must be located near production areas, those serving the ultimate consumer must be many and widely scattered through various local and sectional markets.

Costs of Wholesaling.—The expenses of marketing certain commodities through the various wholesale institutions are indicated in Table XIV. The results show a typical cost of less than 17 per cent of net sales, the most notable exception being the jewelry business. The costs of marketing through branches appear almost uniformly cheaper, though it is not true for jewelry, tobacco, and drugs and sundries.

⁵J. F. Pyle, *op. cit.*, p. 126.

Distribution of total cost by items is indicated for a few commodities in Table XV. The total of direct selling and sales administration expenses ranges from half to two-thirds of the entire marketing cost. The cost of storage shown in Table XV

TABLE XIV
COSTS OF MARKETING BY WHOLESALERS, 1933 *

INDUSTRY	PERCENTAGE OF NET SALES				
	Wholesalers Proper	Branches		Chain-store Warehouses	Co-operative Associations
		With Stock	No Stock		
Automotive product	23.	16.3	11.6	5.	
Clothing	16.	12.8	8.8		
Drugs and sundries	17.	28.7	25.8	3.	
Dry goods	13.8	13.	4.9	3.1	
Electrical goods	22.3	15.5	9.	13.6	
Furniture	22.5	14.8	9.1	18.6	
General merchandise	11.8			11.	
Groceries and food	12.8	12.6	13.8	4.1	16.9
Jewelry	23.8	31.4	10.9		
Petroleum products	16.9	15.8	8.		
Tobacco products	6.4	6.5	2.5	5.7	

* Compiled from *Final Summary of Wholesale Trade in 1933*, Bureau of Census, United States Department of Commerce.

TABLE XV
DIVISION OF WHOLESALING COSTS IN SELECTED FIELDS *

WHOLESALE FIELD	PERCENTAGE OF NET SALES					
	Total	Selling	Administration	Storage	Overhead	Other
Electrical goods	15.89	5.05	6.	2.16	1.93	.75
Hardware	16.68	5.83	4.73	3.04	2.17	.91
Automotive	20.76	7.70	6.46	3.16	2.66	.78
Drug	14.55	4.34	3.93	3.65	1.98	.65

* From T. M. McNiece, "Analysis of Wholesaler's Operating Costs," *Harvard Business Review*, III, No. 1, p. 20.

is particularly large for wholesalers in contrast to the storage costs of manufacturers in marketing industrial goods as shown in Table XXIII. This is what one would expect in view of the wholesaling functions.

Agent Middlemen

In the marketing process apart from the merchants, and functioning chiefly in the wholesale field, is a second large group designated as *agent middlemen*, since they assist those entering the marketing process in the various exchange functions, although they assume no title in the goods. This group numbered 13,816 concerns in 1933⁶ and handled in that year more than 6.5 billion dollars of wholesale transactions.⁷ They seldom take physical possession of the goods with which they are concerned.⁸ Here again they are in direct contrast with the marketing institutions we designated as merchants.

The place of agent middlemen in the marketing process becomes of importance, among other reasons, when the size of the market has grown beyond the possibility of careful study by the individual merchant. The agent middlemen often become specialists in certain lines, developing contacts and acquiring information bearing upon their particular fields. Their knowledge and widespread contacts are valuable in the execution of contracts for either buyers or sellers who have neither sufficient time nor knowledge to do it efficiently and quickly.

It is self-evident that as the size of markets increases these intermediaries become channels for speeding exchanges, economizing costs, and gathering information with greater accuracy. These services are the justification for such large numbers of agent middlemen.

Kinds and Functions.—The kinds of agent middlemen are numerous. Their respective titles are not always significant of their exclusive field of operations but for purposes of general classification they are classified as agents, brokers, factors, commission houses, and auctions.

The first group, the agents, has this distinguishing function: it acts as a representative for others in a series of marketing transactions. Agents may act for either a buyer or a seller, and in

⁶ U. S. Summary, *Census of American Business*, 1934.

⁷ *Ibid.*

⁸ Brokers in securities usually have possession, make deliveries, and settle the financing on account of their trading. Commission houses do much the same.

either case they become regularly associated with their employers.* In 1933 agents were third in importance among the agent middlemen judged by their business volume of over one and a half billion dollars.

The brokers, the second group, act for their principals in individual transactions only, either buying or selling. Of course one may employ the same broker repeatedly, but each time upon a distinct order and distinct terms. Sometimes the broker is commissioned to act as a buyer and on other occasions as a seller. In 1933, with a two-billion-dollar business volume, brokers ranked second in importance among agent middlemen.

The factors, the third type of agent middlemen, usually act as selling agents for their principals and in addition extend them loans or some form of credit assistance on the security of the goods involved. They commonly provide storage and grading services also.

The fourth type, the commission house, usually takes physical possession of the goods it sells and directly, or through other agent middlemen, disposes of the title on the account and at the risk of the owner. Extensions of credit and collection of accounts are common services offered by the commission house. Commission firms ranked first among agent middlemen in 1933 by reason of their 2.3-billion-dollar volume, or a third of all the transactions. As one would expect, this volume is derived largely from dealing in farm products and raw materials.

The fifth type, auction concerns, consists of middlemen who receive goods for storage and, acting as agents, sell the stored materials in the scheduled auctions. Wool auctions in London and Liverpool are of international importance. The fur trade of United States centers in the St. Louis auction. In large centers fruit and vegetable auctions are common institutions.

Costs.—For their services agent middlemen are paid commissions and fees, ranging widely as the goods and markets vary. Agents and brokers in 1933 reported average expenses at 3.2 per cent of sales, with brokers of automotive products showing 21.1

* Agents may be known by specific titles which suggest their associations: export agents, import agents, manufacturers' agents, and selling agents. Advertising agencies may be included here, for their service is clearly an important marketing function in assisting the demand creation efforts of merchants though many place these agencies under the facilitating exchange group.

per cent, brokers of drugs reporting 0.5 per cent, and those of groceries reporting 1.4 per cent. Selling agents reported expenses from 2.8 per cent in handling farm products—raw materials; 18 per cent for farm products—consumer goods; to 25.2 per cent for drugs and sundries.¹⁰

Facilitating Exchange Institutions

Warehouses.—Warehouses are facilitating middlemen concerned essentially with storage operations.¹¹ Their services may include grading and standardization procedures as well as storage. Warehousing has always been important for the cotton, tobacco, grain, and perishable food trades, and general merchandise warehouses are now becoming of more importance as retailers follow a consistent hand-to-mouth buying policy. Warehouses issue contracts known as *warehouse receipts*, which are regarded as standing for the title of the goods placed in the warehouse. A proper transfer of the receipt thus becomes a transfer of the title to the goods themselves—a tremendous convenience to commercial trading.

Organized Exchanges.—Another facilitating institution is the organized exchange, typified by the central market exchange, such as the grain exchange in Chicago. The central market exchange may be characterized as an association or a group of brokers, merchants, manufacturers, and commission men maintaining general quarters for trading.¹² These associations permit

¹⁰ *Census of American Business, 1933.*

¹¹ See H. E. Agnew, "Warehouses in the United States," *N.A.T.M. Bulletin*, Nov., 1931.

¹² Membership in 1936 of the Chicago Board of Trade was as follows:

General commission merchants	177
Cash grain sales agencies	85
Grain elevator companies	49
Beef and pork packers	22
Flour mills	20
Export houses	20
Food processors	15
Import houses	15
Cotton merchants	13
Railroads, steamship lines and forwarders	17
Banks	11
Co-operatives	6
Miscellaneous	41
Total	491

only their members to conduct transactions in this central exchange. Thousands of buying and selling orders gravitate to any such central market exchange and the members, brokers and others, are kept constantly busy representing the various parties or acting on their own account as the sale and purchase of the commodity proceeds from day to day. In many of these exchanges the goods, like grain for example, are not present but are represented by samples and by documents of title that the brokers deliver upon the contracts. In the case of the livestock exchange, however, the animals are actually in the market place. In many places throughout the nation we find organized exchanges trading in a large variety of products—wheat, corn, oats, rice, cotton, silk, rubber, coffee, sugar, copper, butter, eggs, oil, and many more.

These exchanges furnish continuous, stabilized daily markets, and provide a price standard based on the judgment of experts in the interpretation of market news.¹³

Retail Institutions

The essential service of retailing is to supply the particular user with the goods he demands for personal consumption or for business use in the kinds and quantities and at the times he finds them desired. All of this involves standardization, assembly, storage, finance, risk, transportation, and selling. In other words, the retailer performs in some proportions all of the marketing functions although his primary function is selling. The nature of consumption goods and the characteristics of the buyers combine to create the position of retailer in our marketing system. The consumer has steadfastly refused to purchase in large lots, to pay for all of his purchases at once, or to make his selections before the goods are needed. Instead he has steadfastly insisted that all of this be done for him and he has appeared willing to pay for the convenience of these services. Modern retailing, it is true, includes a great number of inefficiencies so that the costs of distribution in instances appear excessive. Considering all of the tasks involved in the field, however, it is more remarkable that the costs have been kept at a point apparently acceptable to most consumers. The institutions established for the conduct of retailing may be

¹³ See The Development of the Chicago Board of Trade pamphlet published by the Board in 1936.

classified functionally as: (1) single-line stores, (2) general merchandise stores, (3) mail-order houses, (4) direct sellers, and (5) service stores.¹⁴

¹⁴ A more detailed classification as suggested by Pyle in *Marketing Principles*, p. 166, combining both the factors of type of organization and type of operation follows.

- I. Independent retailers
 - A. Department stores
 - B. General stores
 - C. Limited-line stores (only a few are named)
 - 1. Shoe stores
 - 2. Grocery stores without meat
 - 3. Drug stores
 - 4. Women's ready-to-wear
 - 5. Variety stores
 - D. Service stores
- II. Chain-store retailers
 - A. Department stores
 - B. General stores
 - C. Limited-line stores (only a few are named)
 - 1. Shoe stores
 - 2. Grocery stores without meat
 - 3. Drug stores
 - 4. Women's ready-to-wear
 - 5. Variety stores
 - D. Service stores
 - E. Co-operative stores
 - 1. Owned by groups of wholesalers or retailers
 - 2. Owned by groups of consumers
- III. Mail-order retailers
 - A. Department stores
 - B. Catalogue only
 - 1. General line of merchandise
 - 2. Limited line
- IV. Commissaries or company stores (maintained primarily for the convenience of company employees)
 - A. Department stores
 - B. Grocery stores
 - C. Combination stores
- V. Direct selling retailers (house-to-house)
 - A. Shoes
 - B. Groceries
 - C. Drugs
 - D. Radios
 - E. Women's ready-to-wear
- VI. Utility-operated stores
 - A. Household appliances
 - B. Grocery
 - C. Combination

The Single-Line Store.—The essential function in the retailing process of the single-line store is to supply consumers with goods of the same general character, limited in range but varying as to price. Drug and grocery stores are examples. The problem is essentially that of all retailing—selling—and is especially important in relation to certain goods. Luxury goods, for example, require more selling effort than do necessities.

Single-line stores may be owned by individuals, by so-called chains, by co-operative organizations, or by manufacturers. Regardless of ownership, the marketing services of these stores, in contrast to those of the other types, remain about the same.

The single-line store is the dominant form of retailing.¹⁵ A great number of specialty shops appear in this form as well as retailers of the great bulk of convenience goods; the two combined make up the largest single type of outlet. Single-line stores may be found both in neighborhood centers and in shopping centers.

Certain weaknesses develop in this distributive institution. The limited line of goods may result in a limited trading volume with consequent higher overhead unit cost. The independent retailer reported expenses in 1929 at about 15.8 per cent of total sales, and 25.4 per cent in 1933. See Table XVI for 1935 expenses of certain retailers. Poor management may make it difficult to compete with the highly developed management of the department store or the mail-order house. Certain buying weaknesses, too, are inherent. Because of its limited volume the single-line store is forced to purchase without the advantage of large-scale discount, although by combining with other single-line stores in a co-operative buying group the single-line store may partly overcome

VII Service retailers

- A. Personal services
 - 1. Barber shops
 - 2. Beauty parlors
 - 3. Funeral directors
 - 4. Cleaning, dyeing, and pressing

- B. Repair shops

- C. Theaters

- D. Hotels

- E. Miscellaneous service retailers

¹⁵ J. F. Pyle, *op. cit.*, p. 176.

this handicap.¹⁶ Chain-store ownership also accomplishes the same result.

TABLE XVI

RETAIL SURVEY BY CONSUMING GROUPS, 1935

	Number of Stores	Total Sales (ooo's)	Typical Sales (ooo's)	Cost of Goods (Per Cent)	Over- head (Per Cent)	Profit -Loss (Per Cent)	Turn- over	Credit Sales (Per Cent)
<i>Food group</i>								
Bakery shops	179	\$ 5,601.60	\$17.90	52.2	45.4	2.4	15.2	40
Groceries & meat	784	48,659.00	33.50	81.7	16.7	1.6	14.8	60
<i>General merchandise</i>								
Country general	2,046	67,007.00	18.00	82.7	15.6	1.7	3.8	40
Small department store	202	29,487.00	45.80	73.6	25.1	1.3	3.3	45
Variety store (less than \$1)	319	10,760.00	15.80	68.7	26.1	5.2	3.1	25
Large department store	—	1,250,000.00	—	64.5	33.9	1.6	3.9	53
<i>Apparel</i>								
Women's and children's ready	595	18,436.00	21.00	70.1	29.	.9	4.1	40
Shoes	487	17,159.00	19.30	67.2	29.5	3.3	1.8	29
Furriers	81	3,660.00	20.70	48.6	49.7	1.7	2.1	40
<i>Household</i>								
Furniture	586	37,599.00	40.80	61.	33.1	5.9	2.8	85
Refrigerators	28	1,007.00	15.60	63.6	35.	1.4	4.	70
Radio	131	1,501.00	6.20	47.9	45.3	6.8	3.6	45

* Compiled from 1936 Retail Survey, Dun & Bradstreet, Inc.

The General Merchandise Store.—An essential characteristic of the general merchandise store is its effort to retail a wide line of goods. Historically this retail institution developed in the earlier agricultural communities of this country as the general store, and it survives even today in the small country town.

The Department Store.—A second development of the general merchandising store is the department store found in urban retail centers. These stores are characterized by many independent departments, each set up as a unit for purchasing and selling a restricted line of goods. Through the combination of all the departments in the store the firm is able to offer merchandise ranging through a general list with great variety as to both style and price. Department store lists frequently amount to as many as 20,000 distinct items.

¹⁶ According to Dr. Paul Nystrom, members of voluntary co-operative chains now constitute a greater number of units than in the chain-store systems.

The chief marketing functions upon which the department store is based are convenience in shopping, variety and extent of goods, and extensive credit granted to customers.¹⁷ The number of department stores in the United States in 1933 was reported to be 3,544, a fact that in itself indicates how strong a development this institution has become in urban centers. Only in such trade centers is there a possibility of attracting customers in numbers sufficiently large to make this store, with its high costs, a feasible economic venture. Department store expenses in 1933 averaged about 32.6 per cent of total sales.¹⁸ Stores with more than \$500,000 annual sales show the best profits.

The major problems of the department store are: making its services attractive and convenient to customers, controlling its high expenses, and maintaining an effective personnel. Many department stores which grew up as independently owned concerns have become part of some large national chain system during the last decade.

The Mail-Order House.—The mail-order house is a third type of retail institution. It is usually located at a distance from its customers, who deal with the store indirectly through the medium of catalogues and orders sent and received by mail. The variety of goods stocked by the general mail-order house usually exceeds that of the average department store. The two major mail-order firms are, in truth, a combination of several department stores. Some mail-order houses, however, specialize in a particular line such as women's ready-to-wear, or men's shirts, ties, and small haberdashery.

The mail-order house depends very largely upon the appeal made by information contained in its catalogue; it has no opportunity to appeal through the personality of salespeople, as has the department store. Price, variety, and convenience for those distant from large stores are the chief mediums of attraction. This institution does most of its business in the rural areas, where the larger department stores are inaccessible and the smaller general

¹⁷ In 1933 sales of 2.5 billion dollars amounted to about 10 per cent of all retail sales. *Statistical Abstract of United States*, 1935, pp. 777-78.

¹⁸ See Table XVI for comparisons.

or single-line stores offer little variety and are not convenient in comparison with the post box at the front door. The mail-order house is faced with special problems of selling during periods of high income in the rural sections, when much of the price motive is removed. A great number of customers, however, have become habituated to the mail-order service. More recently, mail-order houses have established stores in the marketing centers of their regions in recognition of the need to supply the service demanded by the consumer. At the same time, they have sought to achieve a higher volume of sales.¹⁹

These firms save on general sales force, do most of the business for cash, and have large buying power. Their advertising costs, however, tend in a measure to offset these advantages. Nevertheless, in 1933 such firms reported expenses of 28 per cent of net sales, definitely less than for department stores in that period.

Direct Sellers.—Retailing through sellers canvassing from house to house has had a significant growth in numbers but only a slight increase in volume. In 1933 there were 7,026 retailers in this class as compared with 1,661 in 1929, probably due to the depression, when many people attempted to make some money in this way. However, the sales volume was just over \$187,000,000. When great numbers call, customers generally come to regard this type of retailer as an annoyance; consequently it is to be doubted if the field will expand broadly.

Service Stores.—There are many retail institutions devoted to dispensing services—for example, laundries—which serve a widespread market wherein convenience counts for a great deal. In some branches of this field only little training and capital are needed—barber shops and shoe shops, for example—so that the field may be easily entered. Accurate statistical data on these establishments are not available in the same degree as they are for other retail establishments.

¹⁹ It is estimated that sales in 1934 of Sears, Roebuck & Company and Montgomery Ward & Company, totaling above 550 million dollars, derived 48-50 per cent from retail stores.

Retail Location

The better class of retail and department stores seeks out corner locations on business streets in order to secure advantageous window display and heavy pedestrian traffic. It should be observed that mere numbers of passers-by is not sufficient—it is the number of potential buyers. Centers of such traffic command high rentals because stores situated there are practically assured of gaining sales volume. Other factors of importance to this type of business are conditions and size of sidewalks, steep grades, the presence of side or rear streets for delivery purposes, the accessibility of parking lots (often stores maintain adjacent parking lots with free parking service to customers), and near-by transportation—busses, streetcars, subway and elevated stations.

Retail stores carrying "shopping goods" are most frequently found clustered in a relatively small area in the heart of the business district in proximity to office buildings, hotels, and theaters. Such an arrangement gives the stores the advantage of heavy walking traffic and the opportunity to display their goods to great numbers.

Small retail stores selling goods of the convenience type depend more upon the continuous patronage of persons in the area served, and are therefore located in residential districts. For this type of store proximity to competitors is of no advantage; it may even be a disadvantage. Otherwise the location factors discussed in connection with department stores are of about the same importance.

Summary

The marketing institutions are divided in their functional operations between the wholesale and retail groups. The wholesale institutions are specialists in the work of buying or of assembly; the retailers assume the prime function of selling the products of all industry to the consumer.

The wholesale institutions consist essentially of merchants and agent middlemen, there being many subdivisions of each group. The merchants take the title and risk in the goods, while the agent middlemen assist producers and merchants in concluding marketing transactions. More than half of all goods, in the course

of their concentration and dispersion for either the consumer or industry, are handled by the wholesale institutions.

The essential function of the retail institutions is to reach the consumer and sell the products of our farms, factories, and service industries. These institutions form an extensive structure of merchants operating single-line, general merchandise, mail-order, and service stores, together with a few direct selling merchants.

Through these institutions the marketing process operates to give us the advantages of widespread exchange, the ease and convenience of modern retailing, and the extensive utilization of our productive resources.

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P R O B L E M S

1. What is the difference between the merchant and agent middlemen? Between the latter and the facilitating middlemen?
2. Enumerate some of the different kinds of agent middlemen. Justify their existence.
3. Does a merchant assume much risk when he has so many middlemen to assist him?
4. How do you distinguish an auction from a commodity exchange? Why are not both used equally for products?
5. Are the agent middlemen any more than hangers-on? If we dispensed with their services, would their costs be eliminated?
6. What distinguishes the wholesaler from the retailer? Are they competitors or complementary groups?
7. Indicate some of the different kinds of wholesalers. What is their relative importance?
8. What are the costs of wholesaling? Do the different types have different costs? Why?
9. What different kinds of retail institutions have been set up? How do they differ?
10. Contrast the location problems of a wholesale and a retail institution. Make the contrast for a department store and single-line store.
11. How does the cost of retailing contrast with that of wholesaling? What are the chief factors of difference?
12. Why are the costs of agent middlemen and facilitating exchange institutions so much less than those of the merchants?

CHAPTER XXIV

MARKETING CONSUMPTION GOODS

Classes of Goods to Be Marketed

The goods that flow through the marketing system of the country go to two types of purchasers. One group buys goods in order to satisfy personal needs and wants; the second type buys goods in order to aid the production of more business services and goods. In other words, goods can be classified by the group of purchasers to which they are designed to sell. The one group of goods is known as *consumption goods* because they go into the hands of the ultimate consumer. The second class is known as *production goods* because they go into the hands of producers and distributors to assist in the production and distribution of more goods. If the natures of these two types of goods are examined, we will find very strong reasons for the different methods and procedures adopted to market the goods.

Marketing Problems in Consumption Goods

Consumption goods are usually supplied from a wide variety of sources. In the United States the sources of most goods are scattered throughout the country and even abroad. Consumption goods may be in packaged form or offered in small quantity when in bulk. They must usually be ready for immediate delivery or the consumer will not purchase them. All of us are buyers of consumption goods and we have vastly different tastes and pocket-books. We do not all buy the same goods at the same time or in the same quantities. The average consumer often hesitates to make a final choice and conclude a purchase. He buys different kinds of staple goods, usually on the basis of economy, and shopping convenience and selects specialities for certain elements of distinction. Most buyers, as we have already mentioned, expect a large amount of credit extension.

These characteristics of consumers call for a marketing sys-

term that is both extensive and complex. Millions of possible buyers have to be reached and preparations have to be made to interest them. Many designs or styles of the general type of goods to meet differing tastes have to be placed in stock. Large inventories must be carried to meet consumers' demands for immediate delivery. A great deal must be done to create demand through the medium of advertising and display. Effort and ingenuity may have to be expended in order to conclude actual sales because the consumer may become indecisive in his buying and need to be pressed to a conclusion if he is to buy at all.

All of these facts clearly indicate that the marketing channels for the handling of consumption goods must be set up in reference to buyers' characteristics and to the demands made upon the middleman by the consumers.

Types of Consumption Goods.—The manner in which the marketing processes are conducted in an effort to reach the consumer depends a great deal upon the type of goods offered. Goods are commonly classified for purposes of recognizing the different motives in their purchase as (1) convenience, (2) shopping, and (3) specialty goods.

Convenience goods include the class of items that a consumer commonly uses, purchases frequently, and desires to have ready at hand when he discovers his need for them. Such commodities as packaged drugs, tobaccos, and staple groceries are good illustrations of this type of good. These items, we recognize, are something that almost everyone needs at frequent intervals yet does not purchase in any considerable quantity at one time. The buyer ordinarily prefers to purchase such goods close at hand and where it is most convenient. This type of goods has relatively so little in the way of quality comparison or service features that the item of convenience alone dictates to a great extent where it will be purchased.

The contrast to convenience goods is found in that group known as *shopping goods*. These are goods of the same general kind as to quality, style, and price which the buyer desires to compare. Illustrations are furniture, house furnishings, and dry goods—goods that require the consumer's inspection because so many of the elements depend upon the individual's own tastes and

desires. Obviously they cannot be packaged, made uniform, or graded. Comparisons in goods of this type are most easily made in shopping centers or in general merchandise stores. Ordinarily, therefore, the local neighborhood stores avoid stocking these items and are prepared to furnish more of the convenience goods.

The third type of goods, known as *specialty goods*, is illustrated by cosmetics, vacuum cleaners, and the like. Customers for this type of goods are ordinarily attracted by a special element in the goods or in the dealer. Less emphasis on price and more on quality and style usually characterize the demand of the buyer. Relatively few stores serve a large community with this type of merchandise as compared with the number that stock convenience goods.

In all of these instances the outlets seeking to reach the consumer need to make a careful analysis of the method by which the goods are sold and the way in which the consumer reacts. Does he buy them for the sake of convenience? Does he seek to shop and compare, or can he be convinced of the unique or special character of the goods? All of these questions figure greatly in determining a marketing system of distribution.

M A R K E T I N G C H A N N E L S

The channel or method selected to reach the consumer of goods may be one of three general ones: (1) indirect, (2) direct, and (3) co-operative.¹ It is not necessarily true that one method will be used exclusively. In a new and different market a producer may use channels not ordinarily a part of his marketing procedure, or he may use several channels at the same time to insure full coverage of the same market.

Indirect Channels

The indirect channel wherein the producer uses intermediaries to accomplish the marketing of his products is the most important. There has been a substantial shift as to the retail institutions in

¹ There are no absolute classifications which will meet every test. The co-operative channel is mentioned here as distinct because if it is carried to the extent that it has been developed in Europe it will be as distinct a channel as any of the other classifications.

this channel occasioned by the growth of chain stores and mail-order concerns. A review of each of the possible forms available in the indirect marketing channel will emphasize the advantages and disadvantages of each.

Wholesaler—Independent Retailer.—There are great numbers of channels by which producers of consumption goods may reach the consumer. The chief channel is that from producer to wholesaler to independent retailer. The wholesaler performs the major assembly function for the retailers of a section or a territory; he carries a general line of products and does not specialize in a particular kind or brand. The retailers are located in the local market centers, where they sell to local consumers in small lots upon immediate demand. Their tasks are to select out of the wholesaler's stock the goods that will meet local demands and to order sufficiently ahead of the consumers' purchases. If successful in this effort the retailer will turn over his inventory frequently within the year as compared with the wholesaler, whose turnover will be relatively small since he has prepared a large volume of goods in a wide range to meet the demands of a great number of retailers. In 1935 grocery stores showed a turnover average of 11.6 times, while grocery wholesalers showed a turnover of 8.2 times.

In 1933 there were 82,884 establishments engaged as wholesalers proper, selling to retailers a quantity of about eight billion dollars' worth of goods, or 25 per cent of total wholesale volume. These wholesalers had to reach better than an average of 1,500,000 stores in the retail trade, the number having grown to 1,649,081 in 1935.

The independent retailers number approximately 1,300,000 of the total number of outlets. In 1933 their sales were approximately \$17,000,000,000² or 71.2 per cent of the total retail sales.

This clearly indicates that the wholesaler-independent retailer channel of distribution is still, despite inroads made upon it within the past twenty years, the most important single channel of merchandising. Table XVII illustrates the use made of this channel. The prime assembly function is assumed by the whole-

² Bureau of Census, *Analysis of the Retail Census of 1933 According to Types of Operation*, United States Department of Commerce, 1935.



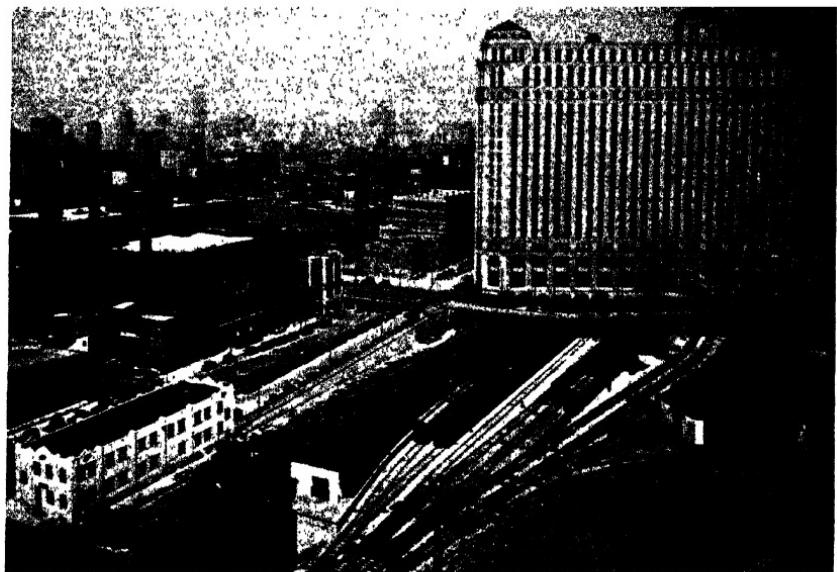
(Courtesy *The Independent Grocergram*.)

Retail grocery store layout showing the variety of goods stocked and the value of careful display.

Retail store, a convenient outlet for the consumer; goods will sell better if attractive stores are maintained.

(Courtesy *The Independent Grocergram*.)





(Courtesy of *The Merchandise Mart*.)

The merchandise mart, a central market

A wholesale grocer's establishment. Storage and odd-lot delivery are important functions of this business.

(Courtesy *The Independent Grocergram*.)



TABLE XVII

MARKETING CHANNELS IN SELECTED INDUSTRIES, 1929 *

INDUSTRY	PER CENT TO WHOLESALEERS		PER CENT TO RETAILERS		PER CENT TO USERS
	Inde-pen-dent	Branches	Inde-pen-dent	Owned	
Coffee and spices	21.5	22.9	36.7	14.9	4.
Cereals	...	89.7	8.8		1.5
Plated ware, silver-ware	...	50.8	41.3		7.9
Leather gloves	34.4	11.2	50.4		4.0
Piano	10.7	5.5	54.0	21.5	8.3
Soap	45.5	32.8	13.6		.2
Cane sugar refined	53.3	26.1	12.1		8.5

* Compiled from United States Department of Commerce, Reports of Bureau of Census, 1931.

saler, resulting in low cost for assembly. The retailer, too, receives considerable long-term credit from the wholesaler.

Nevertheless, this channel of distribution has been criticized from both sides of the marketing structure. The consumer feels that it is an expensive procedure. This is true in so far as a wholesaler finds it necessary to stock a wide range of goods, which necessarily slows his turnover and increases his cost. The producers, in turn, feel that the wholesaler is not sufficiently attentive in his sales efforts to their particular products. In many instances they are right, for the wholesaler cannot push a wide range of goods with great effectiveness. He is likely to leave the choice to the retailers, and this may not be satisfactory to an individual producer. Producers therefore seek channels that will give them better control over the sales efforts spent upon their products. Some have established branch houses to gain this end.

Branch Houses.—A second important channel for the marketing of consumption goods is from branch houses owned by manufacturers directly to the retailers. In such instances a manufacturer assumes the role of wholesaler, although it is usually his practice to stock only his own products. This channel in 1933 made sales to retailers amounting to nearly \$6,100,000,000—19

per cent of the total wholesale volume—third in importance of the channels of distribution.³

The justification for this type of distribution rests upon the desire of the manufacturer to control his outlets and to eliminate the wholesaler's profit. If by accepting a single profit for the two tasks of manufacture and wholesale distribution, he can meet the competitive conditions of the market with a lower price, he is doubtless justified in establishing branch houses. And there is no question but what close contact between factory and retailers frequently results in better manufacturing policies and in the avoidance of losses on overstocked items.

Criticism may be made of this channel on the score of heavy capital outlay. It clearly is not as economical to distribute only a few products in comparison with the many distributed by the general wholesalers for the same capital investment. Further, retailers are reluctant to spend the time necessary to meet a salesman for every single product. To meet costs and please the retailer many branch houses broaden their lines of products to include other items not directly competitive with their own. Ultimately they find themselves in a general wholesaling business. The functions of wholesaling, therefore, have not been eliminated; instead single ownership is extended to two fields of economic service. See Table XVII for extent of use.

Mail-Order House.—Another channel by which the consumer may be reached is through the mail-order houses. These firms sell through catalogues and to a great extent combine the functions of wholesalers and retailers. This channel accounted for sales of more than \$244,000,000 in 1933 in the retail field,⁴ which places it fourth in the order of importance. The justification for this system rests in the inability of many consumers to reach a good market in which there is a wide choice of goods at low cost, although originally, before the advent of motor cars and good roads, the system was developed for those in rural regions who by reason of poor transportation could not reach market centers at all. That this factor is becoming of less importance is one

³ *Ibid.*

⁴ *Ibid.* The two major houses did about 80 per cent of this volume, their combined mail-order and retail stores having a volume of double this figure.

reason why the principal mail-order systems of the country since 1925 have established retail branch stores in many retail centers.

The mail-order system of distribution is unsatisfactory because of the lack of personal contact. The goods that these firms offer must be standardized in order that they may be catalogued and adequately stocked. Adjustments and exchanges of goods are slow, expensive, and sometimes exasperating to the customer. As transportation methods improve, consumers who can then easily reach good markets may become dissatisfied over these difficulties; thereafter the only basis on which the mail-order house will be able to appeal is that of price.

Chain Stores.—Another channel of distribution which has grown since the War into the second most important channel of all indirect methods is the chain-store system. This consists of a series of stores in various localities, combined in ownership and operation, and with a central control and management. The chain system channel of distribution accounts for approximately \$6,300,-000,000 of the retail sales in 1933, which is approximately one-fourth of the total retail sales of that year.⁵ The growth has been phenomenal as appears from the résumé in Table XVIII.

TABLE XVIII
GROWTH OF CHAINS IN THE UNITED STATES

Year	Number of Chains	Number of Stores	Net Sales (In Hundreds of Thousands)
1915	63	3,695	\$ 255
1920	285	13,949	1,292
1925	920	38,955	2,741
1929	1,180	60,992	5,370
1930	1,203	64,891	5,338

These stores, like the mail-order houses, combine the functions of the wholesaler and the retailer, though very often they make use of wholesalers proper, agents, and buyers in assembling their stocks.

⁵ *Ibid.*

The chains have shown pronounced success in variety, shoe, drug, and grocery stores. About 91.2 per cent of the total business in variety stores was transacted by the chains in 1933, as was 46.2 per cent of sales in shoe stores and 43.7 per cent of sales in grocery and meat stores. Notable success has been attained, too, in chain filling stations.

In the grocery field this volume is divided between small chains of four to twenty-five stores, doing about 12 per cent of the total chain business, and sectional and national chains, which account for the other 88 per cent of total sales. There is a close connection between density of population and areas where the chains dominate. This is evidenced by Table XIX, which shows the percentage of total sales in grocery and combination stores by regions.

TABLE XIX

CHAIN-STORE DISTRIBUTION BY DISTRICTS—BASED ON VOLUME IN GROCERY STORES

DISTRICT	PERCENTAGE
New England	46
Middle Atlantic	47
East North Central	41
Pacific	36
South Atlantic	31
East South Central	24
Mountain	23
West North Central	19
West South Central	18

Chains in the department store field have developed since 1925. In 1933 there were seventeen local chains of this group with one hundred stores, and thirty sectional and national chains with 2,972 stores. The latter group showed an increase since 1929 of better than 20 per cent in stores and chains.

The chain stores justify their existence on the grounds that they eliminate middlemen and can save by large-scale purchasing. To date considerable evidence in grocery and drug stores, which show 6 per cent and 11 per cent lower prices respectively, indicates that the chains can justify their existence upon these

grounds.⁶ The chains reported in 1933 an average expense of 27.1 per cent of sales, while retailers showed 25.4 per cent to which wholesalers' expenses of 15 per cent must be added. This clearly shows the advantage of the chains as regards both lower prices and margins. It is worth noticing, however, that there is a limit upon the size of the systems so far as large-scale purchasing may effect economies. In other words, it has been found that beyond a particular volume of purchases the cost increases rather than decreases with the size of the purchases.

The chain-store system has been the center of controversy for the past six years. Chain stores are criticized chiefly for their lack of community interest and for their use of "leaders" or sales of standard products at less than cost so as to attract customers to their stores. Apart from these commonly asserted criticisms there are certain difficulties in their operation. Most important is the difficulty of supervision; it is expensive and may not produce good sales results. The goods and services of the systems are standardized; customers therefore are not offered the complete service that many local independent retail stores are prepared to offer. The rest of the consumer's needs must be purchased elsewhere at some inconvenience to himself and at possible higher prices.⁷

Direct Channels

Distribution of consumers' goods directly from producer to consumer is a possible marketing channel. Much depends on the type of goods if such a method is even to be considered; for example, unless the producer undertakes to maintain retail stores it will be difficult to market convenience goods. Specialties offer a good opportunity, while the service industries, of course, depend almost wholly on this direct channel of marketing. Notice the practices of transportation, communication, and financial concerns. See Tables XX and XII for showings as to the importance of direct marketing to the user.

In this channel the producer of goods, through his own sales

⁶ See various Federal Trade Commission reports on chain stores in Detroit, Cincinnati, and Washington. Senate Documents 85, 88, 95, 96, 98.

⁷ See p. 413, note 14.

methods, seeks to sell directly to his consumer and to deliver the goods through his own agencies to the consumer. The methods used are typically: factory to consumer, direct mail, house-to-house canvass, locally owned stores or branches, and, in some instances, public markets. This channel has been developed out of

TABLE XX
MARKETING CHANNELS IN SELECTED PRODUCTS *

PRODUCTS	PERCENTAGE DISTRIBUTED		
	Directly		Indirectly to Users
	Consumer	Industry	
Autos	18.3	.22	81.48
Refrigerators	11.5	2.98	85.45
Hardware	2.7	17.30	80.
Electrical appliances	.68	61.98	37.34
Coal	1.33	44.91	53.76
General merchandise	.49	35.19	64.32
Groceries	.24	....	99.76
Fish	1.59	....	98.41
Drugs	.29	1.66	98.05
Books	1.53	1.14	97.33
Tires	.85	1.86	97.29

* Compiled from *Wholesale Distribution for the Year 1929*, United States Department of Commerce, Bureau of Census, 1930, p. 78.

the producer's desire to control directly his product in the consumer's market and to reduce sales costs through the elimination of credit, special services, and general overhead. Sales efforts are concentrated exclusively upon the producer's product.

Small-scale manufacturers sell an important part of their output through direct channels. Bakeries and ice-cream manufacturers do a noticeable volume in this way. Tailors and other special order producers usually rely on this channel.

House-to-house selling has shown some increases in volume and numbers engaged, although it accounts for only .7 per cent

of all retail volume. Sales of \$187,000,000⁸ made through this retail channel in 1933 place it about fifth in order of retail importance. In that year this type of selling showed 40.8 per cent of sales consumed in expenses, the highest of any channel. That its problems of supervision are many is illustrated by the fact that one firm is reported as having 1,170 salesmen and supervisors, selling to 780,000 homes in 5,600 towns of 34 states.⁹

Present-day growth of store outlets owned by manufacturers and of factories owned by distributors indicates a trend towards consolidation of distributive and producing functions.¹⁰ Factory-owned retail stores are conspicuous in distributing paints, oil, drugs, clothing, shoes, candy, and tires. The G. R. Kinney Shoe Company has 333 stores, Firestone Tire & Rubber Company operates over 500 store units, and Richman Brothers clothing output is sold through 45 factory-owned stores.¹¹ Since the capital for all the stores must be invested by the producer, this method is an expensive channel.

The direct channel presents difficulties to the producer because of the expensive supervision necessary to control such a widespread group of outlets. It is also difficult to enlist a proper sales force, because in the effort to reduce sales costs, commissions or wages are so low that salesmen of only mediocre ability can be employed. This lack of good sales force creates poor selling results, high turnover of sales force, and makes a general program of sales efforts a difficult one because there is so little continuity in the sales force.

Co-operatives

Consumer.—Still another method of distribution is through the retail co-operative establishment. These are nonprofit organizations formed by groups of consumers to gain a substantial rebate of the normal cost of goods for the members. Such consumers' co-operatives numbering 3,500 did about \$365,000,000 of

⁸ See p. 424, note 2.

⁹ H. J. Taylor, *Marketing Executives' Series*, 67 (American Management Association, 1929), p. 9.

¹⁰ The chain stores and mail-order houses frequently have set up their own production plants.

¹¹ *Industrial Manual* (Moody's Investors' Service, 1936), pp. 723, 1428, and 1609.

business in 1934, approximately 1.5 per cent of the total retail business in this country.¹² This retail channel has made noticeable gains in the last twenty years though perhaps not as extensively here as in other countries, such as Great Britain, Sweden, and Denmark. About 2,000 co-operatives in 1925 handled \$180,000,-000 business, and the membership reached a total of 1,500,000 in 1934.

The Rochdale plan or system of co-operatives in England does approximately one-half of the volume of retail trade in England and has been unusually successful.¹³ Almost 65 per cent of the 11,000,000 families of Great Britain were members of co-operatives in 1934. They owned mines, mills, plantations, and ships, and the output of their factories was five times that of the members of the British manufacturer's associations. These co-operatives are concentrated in the urban centers; agricultural co-operatives in England do not show a corresponding development.

Co-operatives are justified in their existence by their efforts to eliminate the profit of middlemen and to gain the advantages of mass buying. The difficulties that they encounter arise through problems of management, and through the uncertain loyalty and even possible disloyalty of the members. In all co-operatives the hiring of a manager is a problem. This task falls on the members, who frequently are not competent to select or to supervise a manager. An incompetent manager may offset all the gains that the co-operative may be able to make.

Apparently the possible gains to the American consumer, compared with the services and conveniences offered to him by the existing distributive system, are not sufficiently attractive to cause him to form many co-operatives. Membership in the co-

¹² J. F. Pyle, *op. cit.*, p. 194.

¹³ The general policies of the Rochdale system may be summarized: (1) Only one vote can be cast by each member, irrespective of the number of shares held. (2) The number of shares which one member can hold is limited. (3) The business is on a cash basis, and services rendered are reduced to a minimum. (4) All merchandise is sold at regular retail prices; this practice not only simplifies their accounting problem but also tends to prevent severe price cutting with independent dealers. (5) The rate of dividend paid on the capital stock is limited to the current rate of interest. (6) Earnings in excess of dividends are divided among the members on the basis of the amount of goods purchased.—H. C. FILLEY, *Co-operation in Agriculture* (John Wiley & Sons, Inc., 1929), p. 21.

operatives has never been looked upon in America as a definite obligation. In times of prosperity members overlook the price savings of the co-operative and purchase where they wish. Only in times of stringency do the members become steady customers of the co-operative. No business can safely operate on such a wide variance in its annual volume of business. Retail co-operatives will have a difficult role to fill as long as this variation in volume of purchases continues.

Wholesaler.—Co-operation in distribution appears in another form in the various wholesaler- or manufacturer-sponsored groups. These combine with retailers to unify buying and distribution. An example is the McKesson & Robbins drug service plan in which the sponsor for a group of retail druggists is a drug wholesaler and manufacturer. The Independent Grocers' Alliance is another such co-operative wholesale group, though created on different organization principles. In 1933 it consisted of 58 wholesaler-retailer co-operatives operating 109 distribution centers and nearly 10,000 retail outlets.

This is a form of organization new to the distributive field since 1920, and as a method to control the marketing process from producer to consumer it offers important possibilities. These organizations, like consumer co-operatives, are able to stabilize their markets, economize on the assembly functions, and lessen the margins required on the products.

Costs of Marketing

Marketing costs for the retailers of consumers' goods range typically from 25 to 35 per cent of sales as shown in Table XVI, which summarizes the costs and shows their distribution as to types of expenditure. Advertising costs commonly run half as large as sales department expenses. Together sales promotion and advertising costs average 5 or 6 per cent of the net sales, and in the case of certain specialty goods much higher, becoming practically the entire sales expenses. The figures for drugs and toilet articles show 18.36 per cent as the costs of sales promotion, and 11.31 per cent for selling; the radio field shows 5.33 per cent for advertising, contrasted to 5.38 per cent for selling; and tobacco prod-

ucts indicate advertising costs of 8.23 per cent, better than double the 3.23 per cent costs for the selling expenses.

The typical costs for the retailer have been indicated frequently in the text but the material in Table XVI summarizes the overhead costs for the various types of consumers' goods. Likewise the cost of wholesaling consumers' goods in selected lines by the various wholesale institutions is summarized in Table XIV. A division of the costs of wholesalers for certain fields by type of expenditure is shown in Table XV.

S U M M A R Y

The very number of goods, producers, and consumers involved in the marketing structure of consumption goods makes it the most elaborate, complex, and expensive part of the entire distributive structure. Consumers demand large quantities of goods, many services, and convenient distribution, all of which constitute the reason for high marketing costs.

Many methods or channels for marketing consumption goods exist, the dominant type being that of wholesaler to independent retailer. Chain-store and co-operative methods of marketing have made the greatest relative gains in sales within the last ten years. The channels for marketing consumers' goods are obviously in a constant state of flux as business managers seek the best marketing procedure for their products.

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PROBLEMS

1. What are some factors influencing a manufacturer's decision on whether to sell direct to the consumer or through a middleman?
2. What is the retail wholesale channel? What are its chief marketing advantages?
3. Describe the nature of a branch house and give the advantages and disadvantages in its use.
4. Is a chain store a retailer? If so, why do we frequently speak of the chain store as a distinct marketing channel?
5. What special features are found in the co-operative unit? What do you deem to be its advantages?
6. "The mail-order channel of distribution can well be substituted for the other channels." Explain your reaction to this statement.
7. What are the chief problems incident to the operation of the retail outlets by the manufacturers? Why is it done?
8. How do you explain the fact that a firm may frequently distribute the same goods through different channels?

9. State how the channels for marketing consumption and production goods differ. Indicate why this is true.
10. Why do the nature and habits of the purchasers have anything to do with the marketing procedure? With the complexity of the system?
11. Would you uphold the special taxes levied on chain-store systems? Why?
12. What considerations other than costs are there in the selection of the channel best suited to a particular product?

CHAPTER XXV

MARKETING PRODUCTION GOODS

The channels for the marketing of production goods are determined by these factors: (1) the number and size of sources of supply, (2) the number and size of purchasers, and (3) the need for grading and selection. No one channel will serve an industry exclusively, for the actual situations will not fall into uniform classifications. In the whole marketing structure, therefore, there is a wide variety of practices created to meet the special circumstances of the immediate market. This, after all, is what should be expected when it is recalled that some markets are local, others sectional, and still others national.

The buying motives in production goods, as contrasted with those for consumption goods, are largely impersonal. Likewise the units of sale are larger and purchases are made more infrequently. Retail institutions, therefore, are of little importance in the channels used in this field when compared with their use for marketing consumption goods. Other types of channels dominate the marketing structure for production goods because of the characteristics inherent in the goods and the buyers.

Marketing Problems in Production Goods

Production goods, or goods made for industrial use, are produced in a more limited number of manufacturing plants than are consumption goods. And the number of buyers of production goods is clearly limited, since for the most part it is manufacturers and processors who purchase these goods. This market contains about 142,000 manufacturing plants, 1,700,000 wholesale and retail middlemen, and 502,000 service institutions, a total of about 2,500,000 customers. But most of the goods will go to the manufacturers. All of this is in marked contrast to the fifty or sixty million individuals in the consumers' market. The average sales or purchases for any one industrial firm are relatively few in number for a particular product in the course of a year as com-

pared with the number of transactions for a single commodity entered into by any ultimate consumer. This is true because users of producers' goods purchase as establishments or as business firms. Most production goods are purchased on the basis of standard and uniform material; in fact, many of the goods are not even made except upon order of the purchaser. Little personal element is involved in the purchase; technical reasons are more important in testing the sufficiency of production goods than is pleasing appearance.

These characteristics make simple marketing channels possible. The units of sale are large. Materials can very largely be standardized and many sales can be made through description, sample, or specifications. Since so many of the purchases are for manufacture on order, inventory of finished goods can be kept at a minimum. Purchase of production goods is based more in facts and technical matters than in styling or habit, which are the common factors for consumption goods. Relatively few middlemen are required to complete transactions between this comparatively small group of producers and purchasers. Technical tests are the final element of judgment and therefore many of the transactions are completed directly.

Production goods may be divided into three types: raw materials, semimanufactured goods and equipment, and supplies. In selling them one must consider their nature and the widespread or limited character of the market.

Raw materials ordinarily flow into the manufacturing or processing industries. A common raw material may be utilized by more than one industry or, in fact, by a great number producing different manufactured products. Many of these raw materials like wheat are standardized and graded so as to facilitate ease of handling. Above all, this type of goods tends to move in large lots since it is the basic item entering process industries.

Semimanufactured goods are lumber, sheet steel, bar copper, and other such items that have gone part way through the process industry but as yet have taken on no definite form as a machine or a consumption good. This type of goods usually moves in a more restricted market than do raw materials, for relatively few buyers may be interested in the material in its form midway between a raw material and some finished product.

Equipment, as machinery, office fixtures, store fixtures, and supplies, such as stationery, oil, and so forth, are all goods that go to keep the processes of industry moving either in manufacturing or in distribution. In any event these goods are desired only because of the facilities they furnish in attaining another objective. The market for equipment is very broad, and sales are of considerable size, yet such goods are not purchased frequently. Supplies, on the other hand, are sold widely, frequently, and often in comparatively small lots.

The marketing of production goods moves, for the most part, through one of three channels: (1) direct, selling on the part of the producer to the user or purchaser with perhaps the assistance of agent middlemen; (2) producers' co-operatives; and (3) indirect, through the use of merchants and agent middlemen. It has been estimated that nearly one-half of all production goods moves through the channels of direct sale.¹ This means that the producer or manufacturer maintains some sort of selling force as a part of his own business for the sale of his products. The rest of production goods is moved from the producer by the various merchants into the hands of users. Sometimes these middlemen reach the purchaser directly, but seldom through merchants operating retail outlets, except in the case of equipment and supplies.

M A R K E T I N G O F R A W M A T E R I A L S

The first main division of production goods, as previously classified, is that of raw materials. All the general agricultural, mineral, and lumber products fall under this head. Their marketing is usually conducted through merchants and agent middlemen, made necessary because of the widespread production of the products by small unit producers as well as because of the need for grading and assembling the products before they are offered to either manufacturers or ultimate consumers. In the case of agricultural products this system of agent middlemen is most extensive.

¹ Pyle, in *Marketing Principles*, computes that 66 per cent of industrial goods, 52 per cent of agricultural products, as raw materials, and about 50 per cent of mineral products, are sold direct.

Indirect Channels

General Routine.—Wheat, cotton, wool, and meat animals—all products coming from thousands of independent producers—must be concentrated in local and central markets by brokers and commission merchants. This is a necessary prelude to standardizing, grading, and sometimes processing before the products travel on a route of dispersion through the facilities of merchant middlemen into the hands of manufacturers and processors.

Wheat, for example, is usually gathered from the surrounding farm territory into a local market where merchant buyers representing local or line elevators are customarily at hand. Next, through brokers and commission houses, the wheat is sold into central markets such as Omaha, Chicago, and Minneapolis. Here the warehouses or grain elevators grade the grain for redistribution to the mills, feeders, and export purchasers. Livestock produced by the small farmer regularly requires the services of the commission house and brokers in the central markets for marketing. Wool is handled by wool merchants, commission houses, and auctions.

Cotton usually moves first into the local cotton market, out of which it may move through the hands of a general merchant in cotton or through cotton factors. These purchasers move the cotton from the local producers into the larger wholesale centers for storage in warehouses convenient for shipment to the manufacturing centers or for export. Brokers serve as the chief agency by which the mills arrange for their purchase of cotton, again much in the same fashion as flour mills secure their wheat. In 1934 the cotton crop, together with cottonseed, was valued at 744 million dollars, of which about four-fifths was handled indirectly.

The extractive industries, which produce coal, iron, and lumber, find their most effective sales channels through a variety of arrangements with agents, brokers, and merchants. Coal, for example, is commonly sold from the mines by brokers to coal wholesalers, who in turn dispose of it to merchants or local retail outlets—the typical channel of distribution to the small user. In 1934 about 40 per cent of coal production valued at 895 million dollars was distributed by wholesalers proper. About 70 per cent

of all soft and hard woods in the lumber industry passes through lumber wholesalers that distribute to the local retailer or the finishing mills. The lumber trade has some groups of middlemen acting

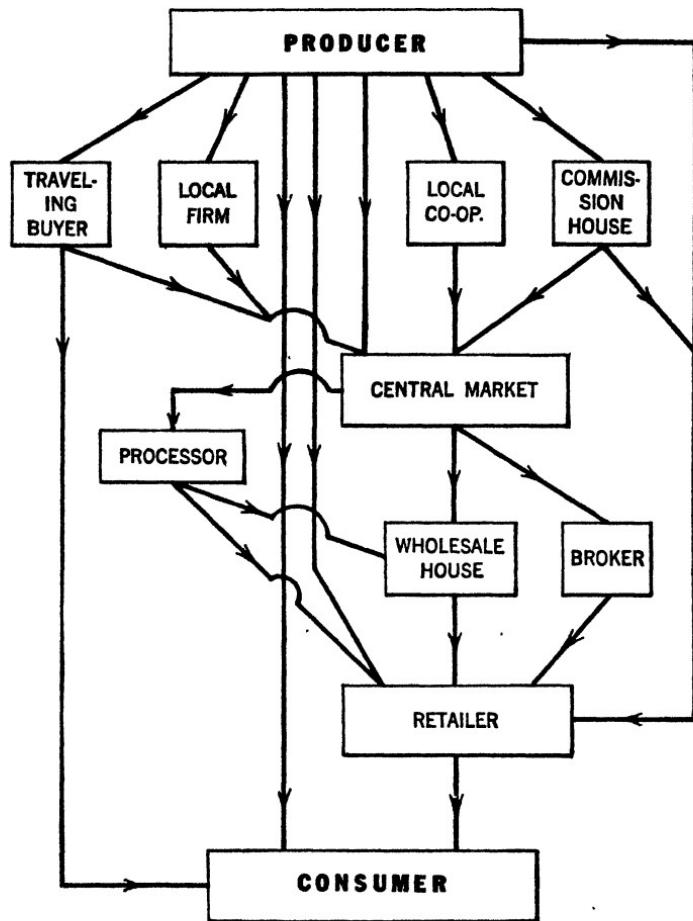


FIG. 39.—Marketing farm products.

as brokers and agents, though as distributors they are not as important as the merchants. Oil and petroleum products move extensively through the indirect channels—in 1933 bulk tank stations reported 1,431 million dollars in sales volume while wholesalers proper handled another 236 million dollars in sales.

Special Agencies: Organized Commodity Exchange.—Among the foremost devices in the marketing structure, especially in the handling of raw materials, are the organized commodity exchanges. These exchanges are, in reality, privately owned business institutions operated by their members of whom about half are brokers. These brokers execute orders, either buying or selling orders, as directed by customers. These various exchanges have been established in market centers where a naturally large volume of the commodity can be offered for sale. These centers, in turn, are usually points of concentration for the physical supply of the commodity and are influenced extensively by the historical development of trading in the area.

Because sellers and buyers gravitate to these concentration centers of the physical commodities, they have become ideal places for the broker to offer his highly specialized service as an agent middleman. In many of these centers brokers and other tradesmen have organized themselves into an "exchange" on which only members can trade. The members govern and control the exchange themselves except for certain government regulations, and receive their pay in the form of commissions charged for the transactions that they complete.

In the more developed commodity exchanges, providing the commodity itself will permit it, we find two divisions within the exchange: the cash market and the futures contract market. The names indicate the functions performed by the two. In the former the transactions are for cash and immediate delivery. In the latter the parties simply execute contracts promising delivery of the physical commodity sometime in the future.

The futures contract market cannot be developed unless the commodity is one easily graded and classified, relatively non-perishable, and having a consistent market demand. Thus in the grain market the futures contract division is a regular factor, whereas in the livestock market it has generally been regarded as an impossibility.

The futures contract division is very important, particularly for the process of hedging. Hedging is a device that enables those operating in the cash market to provide themselves with futures contracts and to minimize the risk of price change that may inter-

vene before they realize their income out of their cash purchases or sales. A typical instance of a business interested in such a procedure is the milling industry, which is primarily interested in a profit to be made out of milling service and consequently wishes to be free from the price risks involved in the grain markets. By the use of hedging, the mill may shift this risk to other persons who make a business of assuming market risks.²

The persons who assume these market risks are called speculators. They buy and sell in the commodity exchanges in an attempt to take advantage of the price movements of the commodity. By the purchase of the contracts, they assume the risk that the price will not react in the direction of their contractual position. But price movements actually depend upon supply and demand, and the speculator's judgment may be erroneous, in which case he takes a loss. On the other hand, he may be accurate in his prediction of supply and demand and the consequent price changes, whereupon he gains on the contracts that he owns. Speculators therefore fulfill a function in the market that other people do not care to assume—price risk. Moreover, a speculator may buy in the market when no one else has any demand for the commodity. Thus it is said that the speculator "makes" a market, which is his second function. That is to say, there are cases when it would be impossible to sell at all at a fair price except for the purchase at that moment by a speculator. In fact, the speculator's business is to assume risks in the marketing process for which he will be paid only in the event that his judgments are correct.

While abuses have crept into these markets and some speculators have taken advantage of the market regulations, it should be noted that there are two useful functions that speculators assume on behalf of other portions of the marketing system. They should therefore be recognized as legitimate and important parts of our marketing structure. It should be recognized, too, that the organized commodity exchanges have become a device for registering speculators' influence on price changes, thus providing a focal point where public prices will be made and quoted, an important service which is an advantage to all who produce or buy such commodities.

² See the specific example in the note, p. 397.

Auctions.—A second important device in the marketing structure of raw materials is the auction. Auctions are conducted at central locations under the auspices of one or more firms that make a business of selling warehouse auctioneering service. Auctions tend to develop at some central point of physical supply, as in the case of commodity exchanges, but they differ in that they sell commodities which cannot be sold without inspection.

In accordance with usual practice the commodity is shipped to the warehouses or the display rooms, where the materials are classified, numbered by lot, and set up for ready inspection of the buyers prior to the auction. At the auction the buyers bid by lot number. The auctioneer receives a commission for his services.

Wool is one commodity usually handled through auctions. Certain grades of wool after carding are readily adaptable to some types of manufacturing, while other cuttings are definitely unsuitable. Only the trained expert can recognize the variations. Since wool cannot be graded as we grade wheat and be sold entirely through description or a paper representative, it must be seen and handled. This furnishes the primary reason for the use of the auction in the case of wool.

Direct Channels

Only a small portion of the wheat and cotton crops go directly to the mills, because most of the processors prefer to have the grading and sorting of these commodities done by the merchants before dealing in the material.

Livestock is being marketed directly in increased numbers as small packing plants have developed throughout the agricultural areas. In addition, the large packers are using buyers who travel through the producing regions for direct purchase of animals. Table XXI shows the tendency of slow but important growth in this channel for marketing hogs. Packers report the costs of buying livestock direct as greater than buying costs in local markets.⁸

Much coal and iron moves directly from producer to user. Great quantities of it move upon mine contracts made directly with large users of this fuel, such as railroads and the steel industries. These industries, in fact, rather generally own coal mines

⁸ Armour & Company, Monthly Letter to Animal Husbandmen, Vol. 8, No. II.

outright. Oil is commonly moved direct from the oil field to local refineries, but frequently the product is piped into storage from which it is marketed by the producers' own sales organizations for export or sale to refineries. Sugar beets are usually marketed as an entire crop directly to the refinery. Sizable quantities of tobacco are also sold directly.

TABLE XXI

DIRECT LIVESTOCK SHIPMENTS IN SELECTED STATES *

YEAR	DIRECT SHIPMENTS (Per Cent)
1920	20.2
1922	24.0
1924	22.0
1926	27.12
1927	32.58

* Compiled from a study by E. N. Wentworth, *Marketing Livestock and Meats* (Armour's Livestock Bureau, 1929).

Co-operative Channels

Raw materials of the agricultural group are extensively marketed through producers' co-operatives. Dairy products, grain,

TABLE XXII

CO-OPERATIVE MARKETING OF AGRICULTURAL CROPS *

Products	Total Value (In Millions)	Marketed Co-operatively (In Millions)	Per Cent Through Co-operatives
Cotton, and products	\$ 722.8	\$100	13.8
Dairy products	1,421.0	380	26.7
Fruits and vegetables	1,165.0	182	15.6
Grain	536.0	285	52.0
Livestock	1,330.0	162	12.0
Poultry	466.0	48	10.3
Tobacco	241.0	5	2.0
Wool and mohair	79.9	13	17.0
All others	381.0	188	47.0
	\$6,706.0	\$1,367	20.0

* Compiled from *Statistical Abstract of the United States*, United States Department of Commerce, 1935, p. 586-87.

fruits, cotton, wool, and livestock are products of which 12 per cent or more of the total 1934 value was handled by this channel in the marketing structure. Table XXII compares co-operative sales to total production of various agricultural commodities.

The co-operative movement has been gradually and steadily expanding since 1910 after the early successes in fruit, wheat, and livestock marketing. Producers in these fields for many years have been dissatisfied with the prevailing high marketing costs. In addition to seeking a correction of this burden the co-operatives seek to control the volume of production in some instances as well as the rate of flow into the market. It has been reported that in some cases as high as 40 per cent of the regular commissions have been rebated by the co-operatives.

M A R K E T I N G O F E Q U I P M E N T A N D S E M I - M A N U F A C T U R E D G O O D S

Semimanufactured goods and equipment present a marketing problem somewhat less complicated than that of raw materials. Grading and inspection are not such important elements here, since the products can be controlled during production. This fact makes for an extremely simple organization of the marketing process for some of the goods.

Indirect Channels

The indirect channel is less important relatively to these types of goods than to any other type of production goods. About one-third of the volume of industrial goods moves through this channel, the balance going through direct marketing methods. But to some classes of goods in this group the indirect channel is important. Cotton fabrics, for example, move through a complex structure of merchants and agents. Office equipment is commonly sold through wholesaler-retailer channels. About 20 per cent of typewriter sales are through this channel. Flour and cereals in 1929 showed 47.3 per cent of total sales by wholesalers.

Direct Channels

The most important channel for equipment and semimanufactured goods is direct sale from producer to user. Since by their

nature semimanufactured goods go to other manufacturers for further processing, little or no problem remains in the way of demand creation. The prime items influencing purchasers tend to be service, reliability of product, and price. For the most part, this means that the producer finds his major problem in production and his minor problem in sales promotion. Sales of some goods are made on the basis of specifications and tests : the buyer dictates

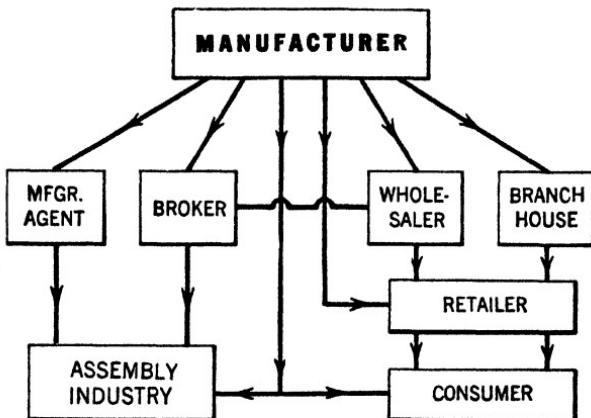


FIG. 40.—Marketing equipment and supplies.

what is wanted to meet his own processing requirements ; the seller offers his services.

Contract purchase for large quantities, or running over long periods, is typical in this field. Once the purchaser finds a satisfactory source of supply he tends to make arrangements for a continuous supply to obviate the necessity of constant hunting for other sources. This practice, of course, makes price the all-important sales factor.

The electrical equipment manufacturer, for example, will no doubt select direct sales methods for large generators in utility power plants. Heavy equipment constitutes a type of goods for which the demand is inelastic ; here, consequently, demand creation is much more an engineering problem than a selling one. Often a purchaser makes known his need and seeks a manufacturer who can produce a machine for the purpose where none had already been devised. Sales, in such instances, follow as matters of course,

demand depending greatly on general business conditions, invention, and managerial policies in connection with outmoded equipment replacement.

Some unusual factors prevail in respect to these goods. The manufacturer may own patent rights (more true of equipment goods than of other types of production goods), and this fact makes sales efforts less competitive. Since most of the goods are nonperishable, speed of distribution is not a necessity. Many of the goods are highly standardized, which results in making the sales problems more acute for manufacturers until they establish their reputation; thereafter many of the purchasers will habitually order from the producer without any solicitation.

Co-operative Channels

Little progress is apparent in marketing equipment by the co-operative method. Some of the co-operatives in the agricultural regions have stocked farm implements but only to a small degree. General industrial buyers seldom use the co-operative method.

Costs of Marketing

The marketing costs of industrial goods and supplies generally run noticeably under the costs of marketing consumers' goods. The typical margin judged by the showing in Table XXIII is near 20 per cent of net sales, while that for consumers' goods is near 28 per cent. Half of the margin for marketing costs of industrial goods is expended for sales expenses—salaries and commissions—with the remainder divided among advertising, credit, storage, transportation, and miscellaneous. The small amount generally expended for advertising is noticeable, while the amount expended by the machinery and tool field is exceptional at 4.38 per cent.

M A R K E T I N G O F S U P P L I E S

Supplies constitute a type of production good which must be marketed very broadly. This fact will cause the method selected to be less direct than is possible for many production goods. But since large users of such supplies make the direct marketing method feasible, the producer is apt to use both consistently.

TABLE XXIII
COSTS OF MARKETING INDUSTRIAL GOODS *

INDUSTRY	PER CENT OF NET SALES							
	Firms Reporting	Total	Sales Department	Advertising and Promotion	Transportation	Storage	Credits	Others
Building materials, supplies	17	23.68	11.7	2.9	1.6	.7	1.	5.59
Chemicals	6	19.87	10.5	1.22	3.3	.6	1.2	2.86
Electrical equipment, supplies	14	19.77	11.9	3.	1.8	.1	.6	2.13
Iron, steel, and products	20	18.95	8.9	1.8	1.3	.6	.7	5.49
Machinery and tools	35	25.83	14.6	4.3	1.	.8	1.2	3.8
Nonferrous metals	6	18.48	10.2	1.	1.0	.5	.8	4.0
Paper and products	20	20.41	9.4	2.5	2.5	1.	.8	4.
Stone; clay and glass	12	21.74	10.	3.	1.3	1.3	.8	5.1
Textiles	11	9.15	5.1	1.2	.6	.1	.6	1.4
Transportation equipment	10	15.50	8.7	1.6	1.3	.7	.6	2.3

* Adapted from "An Analysis of Distribution Costs of 312 Manufacturers," Association of National Advertisers, Inc., 1933.

Indirect Channels

The items of supplies for industry, business concerns, and general institutions are easily marketed through the wholesaler-retailer channel in a wide market. This channel has all the disadvantages, however, of the lack of consistent sales efforts. About 25 per cent of the paper industry's output in 1933 was sold by wholesalers proper, and about 10 per cent of the chemical industry's output was also handled by them.

Direct Channels

The method of direct sale of supplies is used extensively, as illustrated by the sale of petroleum products. The producers of petroleum often maintain a sales force for direct sale of oil for power and lubricating oils to large users. It is difficult to say definitely what portion of supplies is marketed directly but it is substantial.

Co-operative Channels

Only a few co-operative organizations undertake to handle supplies, but an exception exists in the co-operative oil associations, which have had a boom within the last ten years. These organizations in many instances are strictly consumer co-operatives, but numbers of them represent the efforts of farmers and small plants to cut the costs of their power fuels and oils.

Many of the producers' co-operatives have tried stocking machinery repair items, binding twine, and petroleum products. With the exception noted, distribution by this method has not become important, for in 1933 there were only 183 co-operatives handling supplies.

S U M M A R Y

The marketing of production goods is a process distinguished by the high volume of direct sales. A notable exception exists in the case of raw materials, which is a field in which the indirect and co-operative marketing methods dominate the field. The inconspicuous part which co-operative methods play in marketing equipment and supplies is to be noted. These generalizations must be applied, however, with care to the various fields or firms. It is frequently true that where a dominant method exists more than one method is relied upon by a concern because of the nature of the product or of the different market demands.

The costs for marketing production goods usually run less than for consumption goods. Substantial reductions of these costs have been reported by the producers' co-operatives in the marketing of raw materials. The low percentage of costs applied to advertising in this field is noteworthy. Distributive costs of these goods appear to offer relatively less opportunity for reduction than in the case of consumption goods.

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P R O B L E M S

1. What are the chief buying motives for production goods?
2. For what reasons are raw materials marketed by other processes than semimanufactured goods?
3. Explain why distribution of equipment and supplies may require widely diverse marketing methods.
4. What part in marketing production goods is played by retailers? By brokers? By agents? Why?
5. Explain "futures" contracts as they are handled by the commodity exchanges. Why are they necessary to "hedging"?
6. "Speculators are an unnecessary part of the exchange's operations." Explain your view.
7. Do auctions seem a better device than exchanges? Would they not be less expensive?
8. Do you find much standardization to be a part of marketing production goods? Explain your view.

CHAPTER XXVI

SALES MANAGEMENT: MARKETS—PRICES—TERMS

It is obvious by now that one of the most important elements of marketing is that of selling. Careful management of the factors entering selling operations is necessary if the greatest profit is to be gained with the most efficiency.

The elements that constitute sales management might be classified under the following heads: (1) survey of the market; (2) price determination; (3) terms; (4) sales promotion; (5) selling; and (6) sales control. These elements mark out in a large way the general matters that the manager must consider and the fields in which his problems must be solved.

S U R V E Y O F T H E M A R K E T

The first of the factors in sales management is a "survey of the market." It will be recalled that "the market" was defined in Chapter XXI as any place wherein there were buyers and sellers actually entering into contracts of exchange. For anyone preparing to sell, therefore, the first object of all is to find the market. Since a number of details enter into making one market substantially better for a particular product than other markets, the seller faces the problem of selecting his best market.

The Commodity

Before going through this selective process the seller must first examine very carefully the nature of his commodity and the demand for it, and his examination must disclose the location of the better markets. Both the price per unit and the strength of the demand for the goods will have a strong influence upon the choice of markets.

The Buyer

The seller must analyze the types of buyers he might approach and their various demands, compare the nature of his commodity with their likes and dislikes, decide upon their ability to pay, and then choose those localities where he finds the liveliest demand for his product.

Many factors, of course, enter into the analysis of a new commodity and its probable market. Such analysis invariably begins with a question as to whether it is a producer's good or a consumer's good; whether it is a convenience, a specialty, or a shopping good. As was pointed out in Chapter XXII, the approach to a market depends upon ascertaining definitely the nature of the commodity to be marketed. Thereupon the seller may send his goods through channels that are recognized and developed for such commodities. Or, having discovered an essentially new character in the commodity, the seller may follow a hitherto neglected marketing approach that is particularly adaptable to this commodity.

Information

Where does the sales manager obtain the information necessary to make his analysis? One of the most common sources are the trade publications which make a particular effort to gather data relevant to the particular trade and its various subdivisions.¹ Numerous government reports give valuable current information on many aspects of marketing operations, the nature of markets, and where most profitable trading activities appear likely.²

The manager may also undertake an original survey of his market, gathering data which he believes to bear directly upon the analysis. This may be done by questionnaire, house-to-house calls, or other direct devices. The sales manager may use his own organization to get this information or employ experts—often advertising agencies or statistical bureaus—for such surveys.

In most cases the sales manager will never rely completely and independently upon but one of these sources of information. He would be unwise to do so in most instances before testing and

¹ For example, see *Sales Management* and *Printers' Ink* (both weekly and monthly editions).

² See the *Market Data Handbook*, *Domestic Commerce*, *Statistical Abstract of the United States*, Department of Commerce publications, for examples.

checking one set of facts with those obtained through one or more of the other channels of information. Nor should he be content to accept procedures that have become traditional or that he has been accustomed to use. Competition, changes of style and nature of the commodity, and the reactions of consumers will make for a constantly moving series of forces in the market structure. The essential fact he must realize is that markets reflect factors of supply and demand and are subject to constant forces of change.

Distribution Policy

The various channels of distribution and their advantages and disadvantages have already been discussed. The choice of channels for a specific product and a specific market is a matter for the judgment of the sales manager. In such judgments lie many of the risks of business and likewise many of the opportunities for more efficient marketing.

The sales manager's primary job is to watch all the movements and countermovements in the market, to keep fully informed on competing commodities, on buyers, channels, price and style changes, and in some instances to anticipate them. Like a general in battle the sales manager must discover the field, analyze the strength of competing forces, and maneuver the attack.

PRICING POLICIES

Introduction

A primary service of the marketing structure is the machinery by which supply and demand may be determined and prices set. A student of economics cannot overemphasize the importance of price in the economic structure. Price is the factor that ultimately determines the direction and amount of productive facilities flowing into various channels. Its role is of the greatest importance and is especially so to those engaged in marketing. To be more specific, price influences volume of sales, margins of profit, labor costs, material costs, and finance costs.

Prices, of course, are not the same in all places for similar products; in fact, in each market many factors may create a variety of prices for the same type of commodity. Wholesale prices are much more active in reflecting cost factors than are

retail prices which react slowly and oftentimes tend to be based upon custom. Raw material markets are constantly subject to price changes, while prices of equipment and other industrial goods are quite stable.

Perhaps the most noticeable fact about the price structure is that it is definitely interdependent; the cost in one business affects the cost in another. The cost of living influences the labor cost in industry, and vice versa. The widening chain of prices and costs creates a tremendously complex situation. Very often the businessman is the victim of prices rather than their dictator. While many factors may bear upon the costs in a particular business, the price at which the business sells its product is controlled by the supply and demand in still another market. Errors of judgment, the time element, new factors affecting demand and supply—any or all may intervene in a short period to prove that the original selling price set by a producer is entirely in error. Price risk, then, is one of the most vital risks in all marketing.

Price Determination

One engaged in the marketing process and in the midst of this difficult price maze nevertheless faces the problem of setting prices upon his commodities or services. Generally speaking, it is the vendor's problem of whether to sell at the market or at some point above or below it. Market price is, of course, that amount at which other sales of like goods are being made to the customer. It is normally the easiest policy for a seller to follow, but its wisdom depends a great deal upon costs and the nature of the goods.

Consumers' goods are classified, as we have pointed out, into groups of convenience, shopping, and specialty items. In convenience goods, it is natural to set the price at market. The consumer views a convenience article as a staple product and sees nothing in its nature to distinguish it for him whether purchased from one merchant or another, therefore he comes to regard its price as customary and expects all merchants to sell at the same price.

In shopping goods, however, we recall that an element of distinction by reason of quality enters the buyer's mind. The question is therefore whether the seller is to set his prices on levels

different from those of his competitors. In so far as he is able to convince purchasers that his goods are of better quality and that for better quality a better price must be asked, obviously he should adopt a higher price policy.

In the case of specialty goods, the items of quality and merchant's service are uppermost in the buyer's mind, and the possibility of basing prices on the quality of the goods and the ability of the consumer to pay is clear.

This discussion presupposes stable costs no matter what volume of goods may be sold at the price selected. As a matter of fact, most goods are not produced upon a stable cost base; unit costs either increase or decrease as volume produced decreases or increases. That is to say, oftentimes it is advantageous to reduce selling price in order to increase volume of sales, the reduction in price being more than offset by the reduction in costs of each unit sold.

The seller, therefore, has his price policy to determine in the light of both of these factors: the nature of his goods, and the nature of production. Complicating the question is consumer reaction, which must be judged by each individual manufacturer or merchant as it applies to his own particular market. As was pointed out above, markets are not uniform and prices are not uniform in varying markets because of the many factors that bear upon the price in an individual market. This whole discussion should make it apparent that a seller has no easy task in correctly setting his price. Yet, this will be the determining factor for his profits—in fact, for his existence as a vendor. It cannot be stressed too strongly that this risk is real and an expensive one if the merchant misjudges either seriously or repeatedly.

A successful pricing of goods above the market will usually be possible only where the seller can clearly demonstrate the quality of the particular goods and by his salesmanship convince the consumer that quality is more important than price. To do this, of course, entails considerably greater selling expense than that involving goods sold at market price. Chief among these selling expenses are advertising, trade-marking, and packaging, all so that the consumer may be educated to desire the product and that the product itself may be made easily recognizable. Unless the vendor therefore has a product that can be successfully distin-

guished in the minds of consumers, he will find it inadvisable to set his price at a point where the demand will be lessened.

A seller is seldom justified in setting his price below the market unless the demand for the goods is elastic; that is, unless sales will increase by a greater amount than the price reduction. Likewise, the vendor should be in a position to replenish his supply on the basis of lowered costs as sales increase. This price policy is of value to the merchant only as it increases volume and in so doing decreases his unit purchase costs. If this does not follow, then the seller will merely be giving the consumer a part of his normal margin.

Price Maintenance

In a competitive market the merchant or manufacturer always has the problem of maintaining prices so as to cover his direct costs plus a reasonable margin. In other words, he is constantly concerned with maintaining prices and withstanding price-cutting. It is true that a competitive market implies that prices should not remain stable. But the question of price maintenance emerges especially where the products being sold are branded, packaged articles prepared by the manufacturer and advertised at a fixed price.

In this problem there are several parties to be considered: the manufacturer, the merchant, and the consumer, each of whose views we shall examine. The goods have been promoted and advertised at the manufacturer's expense; he has incurred this additional expense because of its probable influence on volume, and he anticipates an increase in volume that will reduce his unit costs. The manufacturer therefore argues that he is producing at the lowest unit price. He feels, too, that it is his right to contract with the retailer of his product to maintain the retail price at the minimum set by himself, a price which will give the retailer a fair margin over and above his costs. Any lower price, the manufacturer contends, destroys the value of his advertising and branding, and this will ultimately lead to a loss of market, a lessening of volume, and an increase of costs. Thus the manufacturer argues that the benefit of a fixed price, while directly coming to him, is in reality a benefit to the retailer and to the consumer also.

The merchant agrees to the extent that price-cutting of a well-

known article by his competitor will place him at an unfair advantage. Price-cutting reduces his usual margin and at the same time destroys some of the recognition value of the product, for it is an axiom that a recognized product sold at varying prices loses its attractiveness as a quality piece of merchandise. Thus the merchant oftentimes feels that price maintenance agreements would help him make sales with the least selling expense and the most profitable margin. Of course many merchants reject this view and go on the theory that since they purchased the goods they are entitled to sell them at whatever price they choose. This, it should be noted, is the correct legal position, for the courts under common law have consistently held that the maintenance agreements are invalid and that merchants are entitled to retail the products at prices set by themselves. Nevertheless, the price maintenance policy has been legalized in some thirty-nine States by statutes, and this type of law was held constitutional in 1936.⁸

Price consciousness seems to be a stronger tendency in our markets than any other factor, and the average consumer probably considers only the price of his immediate purchase with little regard for any long-run economic effects. He no doubt feels that price is the risk of the competitive system and that wherever he can purchase at an advantageous price he should not be criticized for taking advantage of it. Whether this long-run effect upon costs, as alleged by the manufacturer, can be proved is not a matter that can be safely generalized. While there may be need for some stability in market prices, the consumer is probably the one least interested in such stability; rather it is the merchant and the manufacturer who are concerned.

Special Sales.—One of the traditional methods of price-cutting, with the definite object of clearing seasonal or old merchandise, is the so-called "sale." Sales originally were offered once or twice a year, and had as their main objective a cleaning out of all the old inventory. More recently the psychology of the sale has been used as a regular price policy. Department stores now stage general sales throughout the entire store each month and restricted sales in one department or another as often as each week. This practice is nothing but a disguised price-cutting policy. Those who

⁸ *Old Dearborn Distr. Co. v. Seagram Dist. Corp.*, 57 Sup. Ct. 139 (1936).

employ it feel that it helps to produce volume and to maintain the interest of customers. This policy is particularly adaptable to the retail outlets, where we find it a rather common one today.

Trade Agreements.—In the field of producers' goods, where much of the purchasing is upon order of the purchaser, the producers commonly agree on prices in order to prevent the purchasers from playing one off against the other. In other words, a minimum price is unofficially agreed upon for all the merchants in a given trading territory. In manufacturing this has been commonly practiced by what is known as the *basing-point system*. This latter case is typically illustrated by the agreement in the steel industry where quotations on all the products were on the basis of cost from Pittsburgh or the "Pittsburgh plus" basis, the practice now having been abandoned under a Federal Trade Commission order.

As was pointed out, many manufacturers have attempted in their sales contract to eliminate the right of the purchaser to resell the commodity at other than the list price determined by the manufacturer. Lacking statutory provisions such agreements are ordinarily illegal.⁴ Manufacturers have therefore proceeded to create agencies for the sale of their products and have thereby retained control, or they have continued to sell only to those who voluntarily maintain the prices. Another important practice is that of selling goods on consignment to the merchants, who are then actually serving as agents of the manufacturer. In other cases the manufacturers have promoted systems of bonuses or special discounts for those who have maintained the list prices. In some instances a refusal to sell to one who has violated the agreement may be relied upon as an enforcement measure. This latter procedure apparently has some legal sanction, but it is not a very certain one. The recent legislation on fair practices throws the matter of bonuses and discounts into a questionable status. The law requires that the discount be justified solely on the basis of costs, which in these instances would, no doubt, be very difficult to prove.⁵

⁴ *Miles Medical Co. v. Park & Sons Co.*, 220 U. S. 373 (1911), though the case of *Old Dearborn Distr. Co. v. Seagram Dist. Corp.* permits States to legislate statutes granting the privilege.

⁵ Robinson-Patman Act, Public No. 692—74th Congress (H.R. 8442).

On the whole, competition is regarded as the best force to create differences in prices. Those who are immediately interested naturally wish to limit these movements in order to give themselves greater security. Some schools of economists are inclined to agree that stability in price is a necessary limitation upon our free competitive system for an efficient social use of our production machinery. This controversy is at the heart of one of the most important debates now in progress in the American business world.

Markup

In setting a price every seller is engaged in "marking up" his goods. That is, he plans in his selling price to recover the cost of the article plus the overhead cost of his institution in addition to a profit. These latter two items are ordinarily spoken of as the *margin* for the merchant.

In actual practice a vendor must, either through his own experience or that of others, decide the necessary markup for each particular type of goods. Then upon the receipt of goods each article must be so priced above its cost. For example, if each item of a purchase costs \$1.00, and the merchant knows from experience that he must have a markup of $33\frac{1}{3}$ per cent, then \$1.50 is his sales price, of which the cost \$1.00 is equal to two-thirds. This is computed in terms of the sales price, but it is apparent in our example that the 50 cent increase over and above cost represents a 50 per cent margin on the basis of unit cost. Either method may be used by a seller; it is simply a matter of making clear which one is being used so that the margin will be adequately figured. Experienced merchants recommend using the basis of sales price for all markups.

TERMS FOR SALES

Credit and Discount Terms

In the problem of price determination the credit and discount terms set by the sales policy must not be overlooked. Some firms solve this question, of course, by operating on a strictly cash basis. The great bulk of firms, however, have these questions to face.

The importance of this step, the procedure of analysis, and the nature of discounts have been discussed in the section on finance. Suffice it to mention that all of these questions are more than matters of finance; they are equally matters of sales policy and must be mutually determined.

Special Terms

A sales policy may include relationships other than outright sale to dealers, such as exclusive agency arrangements, or selling on a consignment basis. In some cases, as in the oil industry and some chain merchandise firms, the physical plant may remain the property of the producer and merely be leased to local individuals for operation. Again, these special arrangements should be determined by the sales manager only with all the facts at hand and in relation to such other factors as finance, law, and government regulation.

S U M M A R Y

Sales management involves numerous questions of policies that require judgments and decisions. Among these are questions pertaining to the market—the commodity, the buyers, and the channels—and those pertaining to the setting of prices and special terms of sale. Each have their obvious bearing upon actual business operations to which the manager must give attention.

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P R O B L E M S.

1. Why do manufacturers view price maintenance as a policy favorable to the consumer?
2. What are the important elements to examine in determining which one of the three general price groups to choose for an article?
3. What is your definition of a "survey of the market"? Why does it appear to be important?

4. Suggest ways in which a manager may gather information as to his market.
5. Why are prices so important? Does it have any connection with the general economic structure in the pricing process?
6. In your judgment is it accurate to say a businessman sets his price? Explain.
7. How do the varying conditions of cost in production have any relation to price policies?
8. Explain how price-maintenance policies of sellers may, in your opinion, be consistent with a competitive regime.
9. What is a margin? Is it the same as the “markup”? Demonstrate the process of marking up goods.
10. What is a sales program? Indicate its importance to the various phases of sales management.
11. What are some of the difficulties of price fixing, either by agreement or by government regulation, as an assurance of income?
12. How do the credit and discount policies relate to the pricing policy of a concern? Does ignoring such customers' requests solve the problems they present?

CHAPTER XXVII

SALES MANAGEMENT: ADVERTISING— SELLING—SALES CONTROL

S A L E S P R O M O T I O N

The actual task of the sales manager is to make sales, but before this always comes the work of demand creation. This is neither understood nor measured so easily as sales results, but the ultimate goal of all demand creation efforts is sales.

The various devices that are available for sales promotion—advertising, branding, and display—must be carefully selected and fitted together in each individual business. In some businesses advertising may take on a greater importance than display for promotional purposes, in others the situation will be reversed. Expenses for any of these elements of sales promotion must be incurred with due regard for the prices and the service to be offered by the seller. The value of any one of these sales promotion devices is judged by comparing the reduction in the other costs of the marketing process with the sales cost. Again, the sales manager might consider whether a particular promotion scheme performs a definite service for the buyer and whether it is more effective than any other promotional device. An important part of the sales manager's administrative work is to decide on promotion schemes and to co-ordinate the sales promotion work of the firm.

Advertising

One of the most important devices for sales promotion is advertising. It involves an extensive variety of forms—newspapers and magazines, radio, outdoor signs, cards, direct mail, branding, dealer helps and packaging. One of these forms, or a combination of them that is best fitted to the particular business, must be selected.

Important as advertising may be, it seldom assumes an importance in cost even approximating the amount expended for

the selling force. Expenses for advertising are much more extensive in the sale of consumption goods than in the sale of production goods. In the general merchandising store, advertising expenses commonly run between 4 and 5 per cent of net sales, or about a third of the total promotional expenses. In the grocery business, advertising runs to the low level of .4 per cent on sales, while the selling force costs approximately 11 per cent of sales.

In the production goods field it is unusual for the advertising expenses to run over 1 per cent of sales of the manufacturer. Often these expenses average only .5 per cent, and in this field usually range from an eighth to a third of the total promotional expenses.¹

The advertising industry has shown rapid development within the past twenty years. In 1927 it was estimated that the total expenditures ranged close to one and one half billion dollars, and in 1929 to over two billion dollars.²

The primary function of advertising is to assist selling, first of all by winning attention and second by giving information in a form that is attractive. Advertising is occasionally the sole device for selling, but in most cases it is used merely as the motivating force upon which personal selling can build.

Stages of Advertising.—It is generally stated that advertising consists of three distinct stages in relation to the product. These stages are (1) pioneering, (2) competitive, and (3) retentive. The pioneering stage is related to the introduction of an idea or product. In this connection habits may have to be changed or the advantage of the use may require demonstration before any consumer will buy. In the competitive stage, after the product has come to be accepted and a number of sellers appear in the market, the advertiser must succeed in establishing his brand and the distinctions in the product for which the brand stands. In the final or retentive stage, the advertising mentions little of the special reasons for acceptance of the product but repeats the record of the

¹ J. F. Pyle, *op. cit.*, Table 73.

² The more important forms of advertising, as judged by expenditures are as follows: Newspapers \$860,000,000; other periodicals \$340,000,000; direct mail \$400,000,000; outdoor \$100,000,000; others approximately \$100,000,000 each. A. T. Fold, *Bulletin Bureau of Research and Education for Advertising Federation*, 1931, Series No. 1.

firm or the product as a reminder. Few products ever reach and stay in this last stage. The exact stage in which the product may be is to be determined by the attitude of the people toward it. Thus it is apparent that the article may be in more than one stage at a time. If the advertiser is to secure the greatest efficiency from his efforts, his approach to his public must be in relation to these attitudes.

Advertising Objectives: Advertising for Producers.—The general marketing function of advertising is, in the last analysis, the same for all users, yet the specific problems towards which the advertising is directed may differ greatly as between the producer, the merchant, and the service institution or profession. A producer of goods has a wide field of objectives to be accomplished with his advertising work. Primarily the advertising must be expended upon the product if it is to reach the ultimate purchaser. The purchaser may be either a consumer or a buyer of industry—a difference for which the advertising campaign must allow. In addition to product-purchaser advertising, the producer often must conduct trade advertising if he is dependent upon merchants and agencies for the marketing of his products to the purchaser. But countless other products and producers are seeking to induce these same merchants to market their goods. Thus one of the major objectives of the producer in his trade advertising is to reach these merchants and convince them of the merit of his product and the profitability of association with him in marketing it.

Again, a producer may find that he needs to join with other producers in the same field to advertise the industry, perhaps to defend it against the inroads of substitutes or prejudices of the purchasers. Wood, for example, has suffered as a building material in competition with ply boards; cotton fabrics have been partly replaced by rayon products; and the ice industry finds its market usurped by mechanical refrigeration. These industries have often undertaken to dispel by advertising some of the ideas of utility and economy claimed by the competitive products in order to recapture a portion of their markets.

Advertising for Merchants.—The merchant is interested in advertising first of all as a means of promoting his institution; offering his products is usually a secondary though still important

objective. The merchant must stress the convenience, economy, satisfaction, and reliability of his concern. He wants the reader to infer, of course, that what is said about the store is true of any product bought there. Whether the advertisement contains detailed information about few or many goods, the general objective is always to influence the patronage of the reader.

Advertising for Services.—The advertising of a service institution or profession obviously carries no message regarding a product; instead it attempts to promote the service. This task in many ways is more difficult than advertising specific products. It is difficult to be concrete since the advertiser here must deal entirely with ideas.

Many of the professions find that the public misunderstands their work and the relationship of their fees to the services they perform. This is easily illustrated in the case of banks, insurance companies, and accountants. Many firms in these professions have undertaken in their advertising to explain the work and its relation to the workaday processes, hoping to create a definite feeling of good will.

Specific Uses of Advertising: To Increase the Use or Variety of Uses for a Product.—The producer advertising his particular products usually has one or more specific objectives in view, and plans his advertising accordingly. To some degree his methods may be adopted by the merchant and the service institution but perhaps not so successfully. For example, merchants recognize that a consumer desires an article for the use and enjoyment it may bring to him. Much advertising therefore tells the consumer what uses there are for the goods and suggests new ways in which a product may be used.

Advertising should undertake to tell of the variety of uses for a product and stress those which the purchaser does not realize. Yeast, for example, has been advertised as the way to add missing vitamins to the diet, to prevent colds, to build up resistance, to improve complexions, and to aid digestion, all apart from the ordinary baking use. Drug manufacturers have advertised an antiseptic for wounds as a liniment for tired muscles, a cure for athlete's foot, and a disinfectant. Advertising is the medium for spreading such information and it often greatly increases sales.

To Increase the Frequency of Use.—A known product may increase its sales by telling in its advertising of the gains that ensue from the increased use of its product. The advertising of the telephone and telegraph companies well illustrates this case.

To Increase the Length of Buying Seasons.—Many articles are regarded by the purchaser as fitted for use only in certain seasons until he has been told how the use can be extended. This variation of seasonal volume is one of the notorious uncertainties of both production and distribution. In the case of some foods—cranberries and walnuts, for example—this is noticeably true. These two items have been regarded for many years as winter holiday foods. But the advertising of marketing associations for these products has sought to show the uses extended throughout the year. A second instance is that of the beverage dealers and manufacturers who reiterate through the year that their products are more than warm-weather beverages in that they “refresh you,” “build you up,” or “give you that added energy.”

To Increase the Use of Another Product.—Producers selling semiprocessed or raw materials naturally have an interest in the sales of the processed article. They often assist their customers in selling more of the finished product and do so through technical advertising in the trade journals. An example is the new metal alloys.

To Increase the Use of a Subordinate Product.—The manufacturers of equipment in many cases have a restricted market. As in the case of automobile equipment little opportunity for sale exists aside from selling the product for installation in a car. Such manufacturers therefore direct their advertising to potential automobile buyers urging them to insist on their equipment when purchasing a car. Increased pressure from automobile buyers for inclusion of this particular equipment results in increased sales. This advertising has three definite problems to be considered. Since many readers may not be interested in the finished product, the cost of coverage may be great, the suggestion can be only indirect, and the product may not be capable of assured identification.

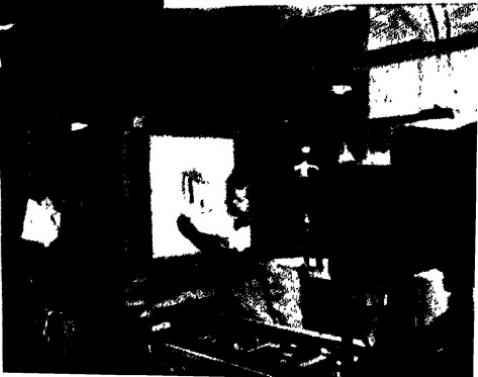
Advertising. First comes the discussion of ideas and plans;



then copy is prepared,
layouts are made and art
work is outlined;

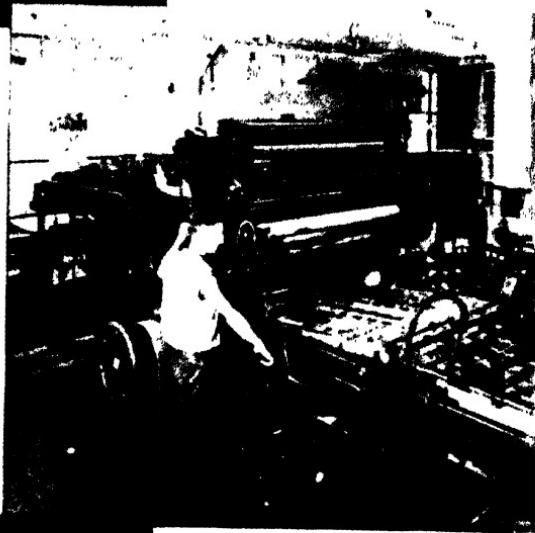
the art work is checked
and then placed before
the engraver's camera.

(Courtesy *The Independent Grocergram*.)





After the engravings
the press plates are pro-
duced;



the color presses are soon
put into action;



and it is not long there-
after until the material is
being packed for ship-
ment.

To Increase the Use of Products from a Line of Products.—

The manufacture of a common group of products usually assists in lowering production costs. The marketing costs, too, of such associated products can frequently be lowered by advertising the common brand. Thus the sale of one product may become the recommendation of another associated product. This is frequent in the case of rubber goods, toilet preparations, and soap products.

*To Increase the Items of Purchase.—*The buyer may be urged to purchase in larger quantities, as a carton of cigarettes, golf balls by the half dozen, a radio for each room, an extension telephone, and a service of silverware. In such cases the advertiser must be sure that the purchaser can use larger quantities and can pay for them. It must be possible to point out some gain to the purchaser—cheaper unit cost, better service, more enjoyment, and so on.

*To Decrease Price-cutting and Substitution.—*A most disastrous form of competition for the established merchant or brand of goods is in cut prices and articles urged upon the buyers as "just as good." To combat this inroad upon sales a firm must at the outset in its advertising set up the distinct nature of its product and train prospective buyers to accept it. But the attack must be made before substitutes actually begin to cut in on sales; otherwise this program is much less effectively undertaken.

*To Decrease and Correct Prejudices.—*Prejudices or traditional outlooks frequently carry sufficient influence with some purchasers so that they refuse to buy certain articles about which they have formed wrong impressions. Advertising can do much to dispel these erroneous impressions or barriers to sales. Soap is an example of the case. Many persons have the idea that if a soap is not white it is not pure, that it contains harmful ingredients. These impressions must either be adequately explained away or turned to a distinct advantage, if the person is to become a buyer of colored soaps.

*Methods in Advertising: Suggesting New Uses.—*A number of advertising procedures may be utilized in the course of planning the advertising campaign. For example, new uses for products

may be advertised by direct suggestion, indirect suggestion, and altruistic suggestion. In the case of direct suggestion the advertiser directly states the uses of his product. The advertisements of many building material producers, for example, illustrate many uses so as to acquaint the purchaser with the variability of the product. Indirect suggestion is typified by the advertisements of the electric power companies which sell electrical appliances, but it is clear that if these are sold the sale of electricity will mount. Paper companies commonly advertise the use of better printing, which naturally will include better paper. Altruistic suggestion is usually in a form meant to be enjoyed by the purchaser, but because the advertiser donates the material it suggests the products of that firm. Such is the case of road maps issued by oil companies, cookbooks given away by flour mills, and radio concert hours. This latter form of suggestion is very effective where good will and public regard are sought in the field of a highly competitive product.

Reaching the Person Whose Judgment Is Relied Upon.—Many buyers rely on the opinions of others for making their final decisions. Consequently the seller should seek to influence the person whose opinion is valued. This is the case of the advertisements which cite the approval of the medical profession for the product, urge the builder to ask his architect, and the businessman to check financial matters with his banker.

Linking One Product to Another.—Sometimes concerns manufacturing noncompeting products find it possible to co-operate in joint advertisements similar to those that some soap companies have worked out with hosiery manufacturers. The case is illustrated, too, by the rubber concern which shows newly designed products to meet new industrial installations of particular firms.

Reaching the New Generation.—The advertising appeal of a product which has won acceptance among older persons must at times be directed to the rising generation of purchasers. These newcomers need to be told the story of the product and its use as it was told to the older purchasers. This fact is of essential importance if a consistent sales record is to be maintained, for every seller deals with a constantly changing group of buyers.

Striving for Recognition as Leader in Field.—It is usually thought that advertising must be applied to an immediate selling problem. This does not follow in all cases. If a firm can sell the idea that it is the leader in the field, that fact alone will influence buyers to purchase its articles. Such advertising cannot, of course, be convincingly based on mere claims; rather it must be justified by distinct achievement in the preparation of a product or service which the public will recognize to be valid and distinctive. Leadership suggests the best so the value of such a message convincingly told is obvious. Momentary popularity may be capitalized upon by this type of advertising but it is effective only for the short-run period, until the public finds that the product does not merit a superior rating.

Making an Advertisement.—The preparation of an advertisement has been commonly divided into successive steps as follows: the idea, visualization, layout, copy, revisions and release. The idea is the heart of an advertisement; it must command attention and convey a specific story. Visualization is the process of picturing tentatively the copy and layout, while layout is the design or pattern into which the copy is fitted. Copy, of course, includes both the art work and the written message. Revision and release are self-explanatory processes.

Further guides to a good advertisement are frequently summarized by such injunctions as:

- Be clear
- Make reading easy
- Compel action
- Make it worth reading
- Give personality to the ad
- Put force into the message
- Give it salesmanship

The advertisement is constructed on a framework known as (1) the heading; (2) the text; (3) the subheads; (4) the proposition (a) offer (b) action impeller; (5) the coupon, if any; and (6) the signature. Examine any current advertisement in a national magazine for one or more illustrations.

Selection of Media.—There are numerous places in which the advertisement when prepared can appear, and ordinarily the

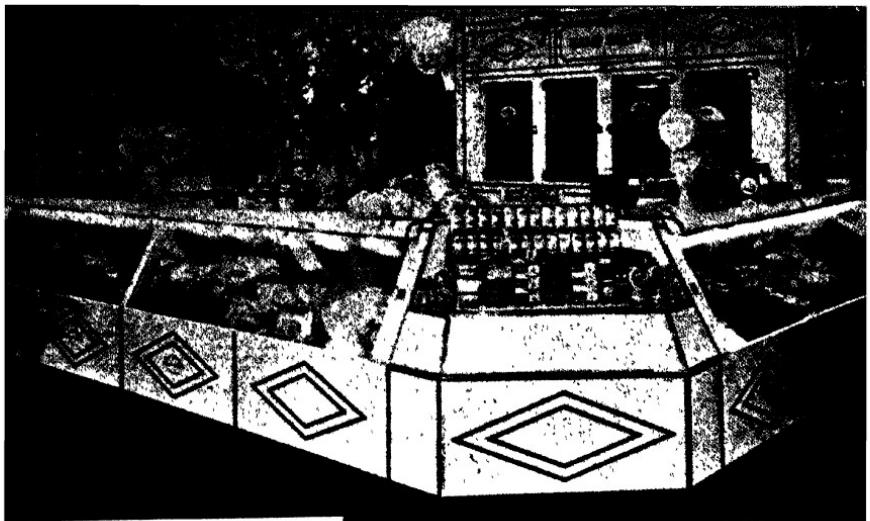
preparation will have been made with the media in mind. The various media were listed above,³ headed by newspaper advertising with magazine advertisements running second. These media reach buyers in different ways, at different times, and at different costs. Choice of media is the work of the advertising manager, or of a member of the regular sales department, or of an advertising agency. The many differences in sales appeal, cost, timeliness and market coverage of the various media are matters for close study if the advertising is to be co-ordinated successfully with the sales policy of the concern. Such co-ordination is another duty of the advertising manager.

Advertising Agencies.—Advertising is a highly technical art both in the preparation of advertisements and the selection of the media. Many firms find that to employ advertising specialists is the best way to make intelligent use of advertising.⁴ Some firms, of course, cannot create an entire staff within their own organization. In such instances, or in the case of advisory service, the business firm turns to an advertising agency. These agencies usually offer to plan, prepare, and place the advertising. They are paid commissions by the media themselves, usually 15 per cent on the contracted advertising space. The customer pays only for art work, plates, and so on, but not for plans, ideas, and copy. As in many of the marketing operations specialization appears again—in this particular instance to create more effective advertising at lower cost.

Social Worth.—Considerable controversy has arisen as to the effect of advertising on cost and price. From an individual firm's point of view advertising is usually regarded as helping to cut costs because it increases sales volume and augments the firm's share of the total market demand. From the point of view of society, many contend that advertising costs become a part of the total costs of all merchants and that the price is actually increased. The latter argument might be true if the same sales total would be reached without the advertising. But it is a moot question whether people would purchase in the amounts and from the

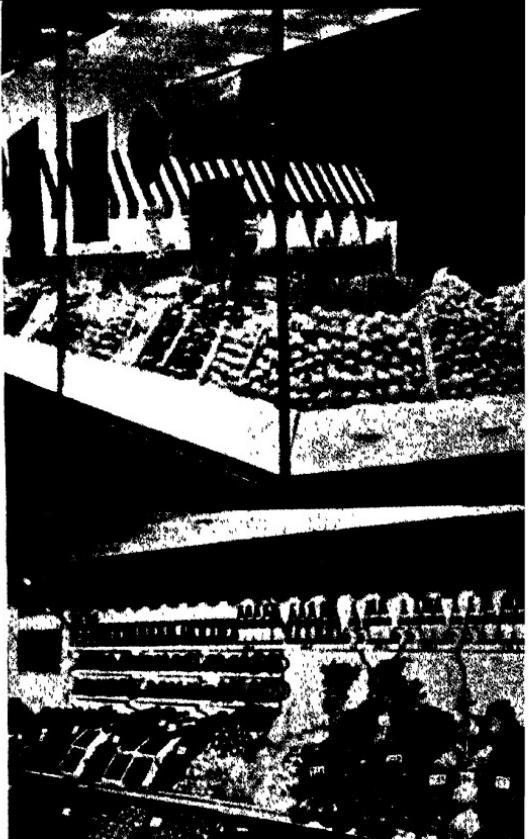
³ See page 465, note 2.

⁴ According to K. M. Goode in *Modern Advertising*, p. 402, there are about a thousand fully recognized agencies in the country.



A meat counter display that takes advantage of all the modern show cases.

(Courtesy *The Independent Grocer*.)



particular classes of commodities they do without advertising as when motivated by the suggestions of advertising. In other words, advertising oftentimes makes people want things sufficiently to bestir themselves to get the necessary purchasing power. Without the driving force of conscious wants it is certainly safe to say that people would remain economically upon a subsistence level. So far as advertising raises the level of wants and induces people to acquire the necessary purchasing power, it is an agency of great importance in raising the standard of living, and from that point of view advertising is economically sound.

Display

A considerably important and effective sales promotion device is that of display. This factor, of course, is more important for consumer goods than for production goods though it is commonly employed in both groups.

Display is a method by which the merchant, either by showing a sample or pictures or by arranging his stock, can show the goods to the customer and permit him to make his own comparison. The method takes little or no sales effort on the part of the dealer.

Window display is employed to attract the customer by the unusual character of the goods shown, by the latest styles, or by a carefully worked out suggestion of uses to demonstrate their value. Display inside a store is a very important phase of the selling effort. It is planned to create demand, and since it permits the customer to make comparisons easily and quickly, it makes for lower costs per sale.

In production goods display is an important element in selling. Models or the product itself are shown to individual dealers or a special display is arranged by the manufacturers for both dealers and public. The industrial shows commonly held by various manufacturers through the winter and spring months of each year are typical examples of this effort to attract the customer by making the goods seem real and practical. These shows, with their demonstrations of the features of the goods in actual operation, help in selling, for what he sees is usually more convincing to the buyer than what he hears or reads.

Branding

As a device for identifying a product in connection with a particular source of supply "brands" are used extensively. A branded product is quickly and easily recognizable by the consumer so that the manufacturer or retailer advertises his brand rather than the individual items sold under it. Those who are first to introduce a brand in a field can usually stimulate consumers' demand for their particular brands in preference to articles unknown and unbranded. So successful, in fact, were early efforts at branding that wholesalers soon began to develop brands of their own to compete with those of the manufacturer. Next the retailers, having discovered the value of brands as a sales medium, began to develop brands of their own. Each of these groups has thus come into competition in an effort to gain consumer preference by branding and advertising within the market area.

This severe competition in brands has resulted in price reductions and ultimately in price-cutting in an effort to maintain sales. The producer finds the costs of advertising mounting disproportionately. He has then either to lower the quality of his product or discover some means of cutting production costs; otherwise the result will be lower profits.

This does not mean to say, however, that brands are not and cannot be made valuable adjuncts to the sales promotion efforts of one engaged in marketing products made on a small margin of profit. Brands are justified not only where the margin is high and quality is the basis of appeal, but also where recognition of and reliance on the local seller are an objective. This explains why so many wholesalers and retailers create their own brands.

The integration of all the many advertising factors discussed here requires careful planning as well as co-ordination with the selling and general control policies of the firm.

SELLING

Sales Program

Every selling organization must have a sales program. This program must relate the products to consumer demand, to the advertising campaign, to the availability of merchandise, and to

the instructions for the selling force. The unification of all these factors constitutes the selling program.

Sales Organization .

The principles of organizing the sales staff are discussed in Chapter XXX so they will not be repeated at this point. But it is obvious that the smooth functioning of selling efforts requires clear-cut lines of authority and responsibility as well as a unified objective toward which all members of the staff are working.

A most important problem in creating a manufacturer's sales organization will be the question of where to establish the headquarters. Some sales managers feel that the best place is at the plant; others regard the central market centers of the country as more advantageous for their head offices. Again some sales managers prefer to set up their headquarters in a city conveniently situated in the field. These various locations are matters of choice as they reflect the organization makeup, costs, customer contact, and production contact.

It has been said repeatedly that the selling department must be closely integrated with the other departments of a business. This phase of sales department organization deserves careful thought by any manager.

Where a seller must cover large territories his field selling organization constitutes a most important problem. Here arise questions of centralization and decentralization of authority, the best divisions of territory for good coverage and staff co-operation, the best system of wage payments—and all these difficult questions must be settled. No hard and fast answers can solve them, for often a firm shifts part or even all of its field organization within a period of a few years, as it seeks to develop better relations out of its experience or that of others.

Management of the Sales Force

In most marketing activities the sales force is the most important of all sales agencies. This is certainly true judged by its cost, but more important, it is true in the sense that a business relies upon its sales force to bring the customer to the actual point of buying, and this, we should remember, is the purpose of all selling. In the consumption goods field two-thirds or more of the

sales costs are spent upon the sales force.⁵ In the field of production goods this cost is even greater, for it runs from two-thirds to five-sixths of the total selling costs.

With such a cost factor involved as well as the actual sales results at stake, it is apparent that the selection of the sales force is of the utmost importance. Various methods may be used to test the applicants, but equally important is close supervision of selling efforts. A very important influence upon selling efforts is the method of paying the staff. Various plans of salary, commissions, quota selling, and bonus payments are used. The salary plan is usually regarded as lacking the best stimulus for the salesman, whereas to a large extent the commission form makes the salesman's wages the reflection of his efforts. The other types are usually attached to one of the two principal methods. An elaboration of the problems of selection, supervision and payment of employees is found in the chapters on personnel.

Salesmanship

The salesman must not only know the goods and have a thorough mastery of the service offered so that he can intelligently answer questions and anticipate objections, but he must know a good deal about competing products. The buying motives of buyers and the talking points for the goods need to be studied and brought together so that an understanding of the psychology of the situation will be an aid to the selling. In fact, a knowledge of the psychology of selling has become of such increasing importance that the subject is now frequently included in college curriculums.

The seller has first to gain an interview with the customer. The selling procedure will then usually include a demonstration, during or after which it may be necessary to meet various objections. Finally, the seller must close the sale. These elements compose the fundamentals of salesmanship.

Application to Specific Fields.—The selling problem in any particular case will revolve about the question of who takes the initiative, and the nature of the buyer's purpose. In the case of retail selling, where the customer approaches the seller, the selling

⁵ See p. 465, note 1.

technique is vastly different from that used in door-to-door selling, where the salesman seeks out the customer. Then, too, the differences that exist among consumers, retailers, wholesalers, and industrial plants in the type of goods they buy and the purposes for which they buy call for varied sales approaches.

Selling to retailers is usually undertaken through two different types of salesman: the first is regarded as a house representative who takes orders for a wide range of goods, and the second as a specialty representative who sells but a single article or line. Specialty representatives are commonly employed by manufacturers to supplement solicitation by wholesalers.

Selling to wholesalers is not unlike selling to retailers. There is a great similarity in the two groups of buyers, though the wholesaler is often more highly trained. Both, however, have price and the possibilities of profit as primary objectives. The salesman in these instances is commonly dealing with an expert buyer, so the seller must know values, trade conditions, and business technicalities thoroughly to make an impressive presentation.

Selling to the professional buyer and purchasing agent permits little of the usual sales talk and appeal. These men are experts on markets, supply, demand, prices, and terms, and the seller can appeal to them only as he conforms to their particular buying requirements. These are usually rigid and the seller cannot expect to change them by his salesmanship.

It is certain that no one sales system can be suggested for all types of business. It remains for the sales manager to judge the nature of his product before he adopts any particular sales policy or takes on a sales force. It is evident that there must be close co-ordination between all the sales promotional efforts and the sales force; otherwise there will be a loss both in efficiency and result. This is one of the most important tests of the sales manager as a co-ordinator.

S A L E S C O N T R O L

Standards for Control

To exercise sales control implies, first of all, an adequate knowledge of standards that should serve as the goal to be

achieved by the sales manager and his department. These standards are based on various factors: (1) the volume of sales, (2) the expenses incurred, (3) the margin realized.

The sales manager may set up standards from past experience of the business and based on the financial as well as the sales statements. Likewise, the results of other concerns recognized in the field may be taken as indications of a standard and utilized as a guide to test his plans and to control the sales efforts.

Standards vary widely according to the class of business. For example, in the general merchandising field the margins will usually be small as contrasted with machinery sales in the production goods field. Further, in the former instance the cost of sales will be a high percentage of all costs, whereas in the latter case it will be a very small part of the whole.

Budgets

A common device utilized by the sales manager in his control operations is the sales budget. This budget is prepared after the fashion of a financial budget, but is concerned with physical units and sales price, not with all costs of operation. The master sales budget is usually divided into territorial budgets and these in turn are subdivided into quotas for individual salesmen. By comparing results with the budget a sales manager can quickly discover which items, territory, or men are not achieving the expected results. Elaborate display charts or graphs are frequently used to demonstrate this information.

In preparing his sales budget the manager must carefully consider a series of elements in order to arrive at a result with any accuracy. First of all, there must be a careful résumé of the methods of selling, distributing, and advertising, of the demands of customers and of the nature of the product so that the general picture will be carefully drawn and comparisons avoided with cases that are not comparable. Second should come a consideration of the general business conditions expected over the period as they reflect demand and ability to pay. Third should come a careful examination of past sales records and other relevant figures. Finally must be considered any information from other departments of the concern, for it may happen that the production

department or the financial department cannot produce or finance the output upon which the sales division bases its figures.

Since the budget is based upon prediction, it may need to be adjusted during the period it covers. When new facts which will affect the budget become clear, there should be no hesitancy in making necessary changes, although naturally the budget will be most useful if it can be adhered to.

Setting individual quotas for salesmen serves as an incentive for the salesmen and usually also as the basis for their salaries. Where commissions or bonuses are paid, the quota set for a salesman becomes a very important item. Obviously, it must not be placed so high as to set an impossible goal, for then the salesman will be disheartened. On the other hand, the salesman must achieve a certain minimum before extra commissions or bonuses are warranted.

Inventory Control

A major factor in attaining profits within a given period is the efficient use of the firm's entire capital. That is to say, the firm must carry an inventory clearly adequate to complete deliveries on orders during the period, and the inventory should not go beyond these requirements. A larger inventory is likely to retard the turnover, resulting in a lower net profit for the period and possibly raising margins above competitive prices. To keep inventories at just the right level is no easy matter and requires careful judgment.

Most firms set up definite accounting and storage systems—charts or file cards—for inventory control. Replenishments must be ordered sufficiently ahead so that at no time will the supply be exhausted. This is a difficult matter, because the time element of production and delivery between products varies so greatly, and for these purposes a control system is essential. In companies selling a wide variety of products the problem in inventory control is an acute one.

S U M M A R Y

Sales management involves important problems of both operation and administration, especially in view of the pressure for

more economical marketing. The elements in sales management are: promotion, advertising, branding, packaging; selling, sales organization, management of sales force, salesmanship; and sales control.

In modern business successful selling is vital, and hence the sales manager occupies a key position. Yet costs of sales management are large and have incurred the opposition of many purchasers. Forever faced with these two demands—increased sales and lower costs—the sales manager must be alert to new trends, new products, new methods, and must weigh many elements carefully before making decisions.'

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P R O B L E M S

1. Explain the great growth of advertising in modern sales management.
2. Does relation of costs between the sales force and advertising seem reasonable to you? Explain your view.
3. What are the stages in advertising? How may the general objectives of advertising differ between producers, retailers, and service institutions?
4. Name some of the specific uses of advertising and illustrate the point with an actual case.
5. Why has the advertising agency developed? Indicate how such an agency may be of some service beyond the preparation of copy.
6. How can advertising be accused of social waste? Are there any grounds? What defence do you find?
7. What justification is there for the use of such large sales forces in the marketing process?
8. Why is sales organization a special problem for the sales manager? What is the problem of co-ordination in such an organization?
9. What are the general elements of salesmanship? How do these elements differ from retailing and wholesaling?
10. What are some of the different buying motives which bear upon the kind of salesmanship which must be used?
11. "If the profits are satisfactory, any elaborate effort for sales control is foolish." Justify or criticize the view.

12. What is the relationship of sales budgets to inventory control? To sales control? To the sales program?
13. What forms of sales promotion are to be considered outside the scope of advertising?
14. Explain some of the problems involved in branding goods. What are the advantages of this procedure?

CHAPTER XXVIII

TRANSPORTATION AND SHIPPING

THE TRANSPORTATION SYSTEM

Transportation has grown to be one of the four most important industries in the United States. The fact that the volume of per capita trade is greater in the United States than in any other country in the world is a result of this extensive transportation system. Without the services of the transportation industry the great agricultural areas of the country could never have made their rapid and extensive development of the last century. Without this great service industry the manufacturing industries of the United States could not have obtained their raw materials or their power from coal; nor could they have reached the markets of both this country and of those abroad with their finished products. Specialization by geographical areas, by division of labor, and by industries is impossible without the physical connections maintained between all parts of the economic order by the transportation system.

Accustomed as we are to the regular provision of vegetables, fruits, and meats in the daily food markets, we do not realize the vast territory and large variety of sources from which many of the products have been secured. That very failure to realize the important role of transportation is strong evidence of the efficiency and service which the industry gives us in everyday life. Only when a disruption occurs in these food supplies or in the supplies of industrial products needed in business do we sense the real import of the nation's transportation service. So smoothly and untiringly does this industry serve all other industries that we accept its work as commonplace.

Shipping Services

Many methods or forms of shipping are available to the shipper. The railroads are considered our standard transportation

method since they haul about four times as many tons as does any other shipping system of the country. A great deal of the railroad tonnage is in heavy and bulky commodities being hauled long distances. Water shipping is important for this same group of goods but it is limited by the accessibility of the shipper to the terminals and by its slowness. Motor trucks are a distinctly modern form of transportation, being coupled very largely with the recent widespread development of hard-surfaced roads. The trucks are especially adaptable to small shipments of relatively valuable freight hauled over short distances and including door-to-door delivery service. Trucking is not, however, confined to this field alone, for many long-distance routes for bulky freight have been developed. Pipe lines are used by the oil and gasoline companies to a great extent because production and refining areas are often widely separated. Air transportation, the newest shipping method, is of great value for its speed and serves especially in the case of valuable articles.

The various forms of shipping in 1935, classified by freight tonnage, are as follows:¹

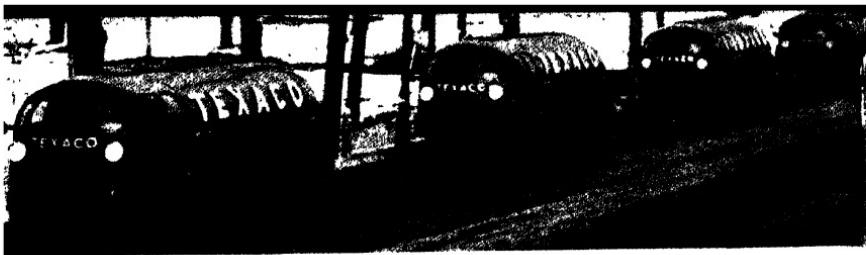
Type	Tonnage (In Hundreds)	Per Cent
Railroads	1,440,434.0	69.0
Water—internal and coastal	403,027.0	19.0
Pipe lines	152.0	.6
Airplanes	9.3	.04
Trucks	245,775.0	11.36

Railroads.—The railroad system of this country represents the largest single investment in any industry. This investment amounts to more than twenty-five billion dollars, being divided between about fifteen billion of debt and about ten billion of capital stock. These securities are held by more than two million security holders, the largest holders being the major life insurance companies of the country. This investment, in addition to earn-

¹ *Statistical Abstract of the United States*, United States Department of Commerce, 1936, pp. 386, 402, 403; and Daggett, S., *Principles of Inland Transportation* (Harper & Brothers, 1934), p. 5.



(Courtesy Norfolk and Western Ry.)



(Courtesy *The Texaco Star*.)

Motor truck transportation has streamlined its new models. These are a part of a new fleet of tank wagons delivering bulk loads to small dealers and individual users on farms and in shops.

Air transportation now uses some of the largest planes in history. This plane has a top speed of 218 miles per hour, so that it has both capacity and speed for its service.

(Courtesy *The Texaco Star*.)



ings retained by the companies, has permitted the construction of a network of over 230,000 miles of main track. In 1850 the mileage for the railroads was a bare 9,000 miles and constituted an investment of forty million dollars.

A major group of industrial employees is represented by the railroad workers, numbering on the average more than a million persons to whom wage payments of about a billion a half dollars are made annually. Security holders of these rail systems received about half the sum paid in wages, or approximately \$770,000,000² annually. In recent years, however, as many as two-thirds of the stocks have returned nothing to the investors because of the low earnings since 1930.

Waterways.—The second most important medium of shipping for the country is the internal and coastal shipping industry. This system represents an investment of more than three billion dollars and carries about 20 per cent of the nation's shipping in recent years. The country's internal and coastal shipping amounts to about five times that of foreign commerce, which indicates the essential position it occupies in the whole transportation system. Where shipping by water is feasible, this system has a great rate advantage over the other types. Wheat shipped from Chicago to New York by rail costs 14.7 cents; by water and rail, 7.62 cents. The lack of speed in shipments by this method is a handicap. Where time is not of great importance, however, marked saving can be made on bulky and low-valued freight by use of the water shipping services.

Pipe Lines.—The capital investment in the pipe lines of the country is more than half a billion dollars. This type of shipping is restricted to articles of certain types but it is of growing importance. The use of natural gas for domestic and commercial purposes in all large centers has given this field a special impetus. Most of the systems are owned by the oil and gas companies for the shipment of their own products, but they frequently act as common carriers for the shipment of the products of other concerns.

² *Statistical Abstract of the United States, 1936*, pp. 375, 377 and 384.

Airplanes.—The newest transportation form, as represented by the airplane, has shown a phenomenal growth, having attracted some half a billion dollars of capital and recorded some eighty million miles for commercial flights in a year. The limit of usefulness for air freight and express shipments is largely determined by their great value and the need for speed. This has proved an excellent method for emergency shipments. Banks, florists, advertising agencies, and medical laboratories have all found this method a successful channel for hurrying regular shipments.

Trucks.—A shipping service developed largely since the World War has been founded on the motor truck. With some three million and a half trucks available for transportation, it is obvious that a considerable part of the whole transportation volume can be handled by these machines: Many of these trucks, of course, are in the service of individual concerns, where they contribute especially to the local and urban transportation needs of business. Intercity trucking is the more conspicuous service of this field in its recent growth. The flexibility of this service has made the truck the potent factor it is. A great deal of the long-haul business is expected to return to the railroads, however, under the increasing regulation of rates and service in this field.

S H I P P I N G A N D R O U T I N G

The individual business has the more specific problems of preparing its articles for shipment, handling the bills of lading, obtaining insurance, checking rates, and determining the routing for its actual shipments. These are the problems of traffic management; these are the everyday realities of shipping.

Packing

One of the first essentials for safe and economical shipments is good packaging. Since packing material costs money to ship, it should be light in weight to avoid excessive freight bills but strong enough to give the goods adequate protection. Thorough studies of packing materials, the methods of placing in the containers, and the strains the package will meet in shipping should be made by all shippers. Trade associations and shipping systems frequently

make the reports of this work in the larger concerns available to all business firms.

Bills of Lading

When shipments are received by the common carrier, the receipt issued to the shipper is known as the *bill of lading*. A form of this bill appears in Figure 41. This bill of lading may be issued as a *straight* bill—in which case only the named consignee or his agent may receive the goods—or it may be issued as an *order* bill. The *order* bill is marked *negotiable* on its face to indicate that the holder may endorse the bill, transfer the bill to another person, and thus vest the ownership of the goods in the new holder. These bills are uniform for the railroads of the country but they are not uniform for the water shipping or the trucking systems. Thus the exact nature of the contract, except in the case of the railroads, varies according to the form that the individual firm may use.

The bills of lading issued by common carriers are to be regarded as important papers not only in the process of shipping but likewise in the financing of sales transactions. In many cases the shipper will endorse the *order* bill with his signature—a blank endorsement—and attach the bill to a draft, which is discounted at the commercial bank. The bank, because it possesses the bill, is safeguarded by the value of the goods since the carrier will not surrender the goods until the *order* bill is returned to them. The bank, of course, surrenders the bill only after it receives either an acceptance or payment of the draft. Quite frequently the shipper uses the bill as a device to secure the payment of the price of the shipment. The shipper, in such a case, sends the bill attached to a draft to a collecting bank in the town of the buyer; until the buyer pays the draft he cannot obtain the goods. The seller, in the meantime, is protected by the value of the goods through the bill of lading, which controls the shipment.

Insurance

Insurance to cover risks in the course of shipment needs to be provided in many cases. Domestic rail carriers of interstate shipments are insurers within the limits specified in their contracts. Firms will find it advisable to obtain insurance for intra-state shipments since the railroads are not always completely liable.

Since certain hazards, such as earthquakes, floods, and cyclones, are not involved in these liabilities, special insurance against them may be needed.

The shipper should give special attention to his marine insurance, since the water carrier is not liable for any event other than its own carelessness. The exclusions of the general risks of property destruction are common terms in all bills of lading issued by the marine shipping concerns.

Special Shipping Terms

Many abbreviations are used to designate the agreements of the parties in relation to their shipments. The term "f.o.b., Detroit" (shipper's station) is used to indicate "freight on board"; that is, the shipper puts the goods aboard a carrier at the named station, Detroit, without charge to the buyer. The actual freight charges, however, are borne by the buyer. If one desires to shift the freight payment upon the shipper, it can be done so by the use of the term "freight prepaid," or "f.o.b., Chicago" (buyer's station). In the latter case, the naming of the buyer's station obligates the seller to pay the freight to that station.

"C.i.f." is an abbreviation meaning that the seller is required to cover "cost, insurance, and freight" in his quoted price. This method is more common in water shipping, since the carrier has no insurance liability and protection needs to be provided.

"C.o.d." is an instruction to the carrier to "collect on delivery." In other words, deliver the goods only after the consignee has paid the purchase price to the carrier, who will act as agent to return the payment to the seller. This is a good method for retaining the security of the goods in order to assure payment of the selling price.

Rates for Shipping

Shipping rates are a vital factor in the cost of the goods in their markets since about twelve and a half cents of the consumer's dollar represents shipping costs. This cost, in many cases, will determine a business concern's ability to reach markets, to bring raw materials to the present location, and to obtain power at satisfactory prices. Rates, therefore, have much to do with the de-

velopment of territories, commodity markets, and urban centers of distribution.

The rates of marine shippers and truckers are relatively simple. The charge is usually computed by the volume or weight of the articles in conjunction with the distance traveled, though a great deal of individual bargaining may enter into the matter because the rates are not under strict regulation. The marine concerns have usually settled upon general rates in joint conferences or pools, but many independent concerns are never involved. The railroads of the United States have a much more complicated rate structure into which differences may appear by reason of territorial divisions, commodity classification, and special rates.

Territorial Classification.—The railroads have divided the country into divisions known as Southern, Western, and Official, and have constructed different rates in the divisions for the same kind of shipments. These differences arise out of traffic and population density, and the general historical development of the area.

Commodity Classification.—The rates set up by the various shipping agencies as well as by the railroads make different rates dependent upon bulk, value, and weight of the goods. In the case of railroad rates, this classification becomes very minute, each type of goods and individual products being given various group symbols to which is attached a particular rate. A good index to the complexity of this structure is found in the freight-rate tables of the mail-order catalogues of Sears, Roebuck & Company or of Montgomery Ward & Company.

Preferential Classification.—Some products gain special treatment in the rate structure since it is apparent that the markets could not be reached under the ordinary burden of the regular rates. The citrus fruit industry illustrates this practice. California and Florida are able to ship into the country's central markets by reason of special low rates, and California is able to reach the Eastern markets in competition with Florida, which she would otherwise be unable to do because of the great distance. Since the normal rates in such cases would make shipment prohibitive, it is to the advantage of the railroad to have the traffic

CONSOLIDATED FREIGHT CLASSIFICATION NUMBER 11

PUBLISHING THE RATINGS, RULES AND REGULATIONS OF THE OFFICIAL, SOUTHERN, WESTERN AND ILLINOIS CLASSIFICATION

ITEM	ARTICLES	RATINGS		
		Official Illinois	Southern	Western
8	GRAIN, see Notes 1 and 2—Continued: Buckwheat: In bags, barrels or boxes, L.C.L. * In packages named, or in bulk, C.L., min. wt. 42,000 lbs.	5 6	6 A or 8	4 B
9	Corn, N.O.I.B.N.: Not shelled:			
10	In crates, L.C.L. In bags, barrels or boxes, L.C.L. * In packages named, C.L., min. wt. 40,000 lbs., or in bulk, C.L., min. wt. 49,000 lbs.	4 5 6	6 6 A or 8	4 4 B
11	Shelled: In bags, barrels or boxes, L.C.L. * In packages named, C.L., min. wt. 56,000 lbs., or in bulk, C.L., min. wt. 61,600 lbs.	5 6	6 A or 8	4 B
12	Durra (Jerusalem Corn), Feterita, Kafir (Kafir Corn), Kao-liang, Milo (Milo Maize) or Shallu: In bags, barrels or boxes, L.C.L. * In packages named, or in bulk, C.L., min. wt. 56,000 lbs.	5 6	6 A or 8	4 B
17	IRON OR STEEL Bands or Rods, Structural, weigh- ing each 15 lbs. or over, with heads, eyes, loops or screw threads, N.O.I.B.N.: L.C.L. C.L., min. wt. 36,000 lbs.	4 5	4 6	4 5
18	Bars, Sheet or Tin Plate: L.C.L. C.L., min. wt. 50,000 lbs.	4 5	5 6	4 5
19	Bars, N.O.I.B.N., see Notes 3 and 4 L.C.L. C.L., min. wt. 36,000 lbs.	4 5	6 6	4 5

FIG. 42.—Freight rate classification schedule. Excerpts from the rate classification manual. The numbers in the columns under the freight districts indicate the rate to be applied by the district

if it pays something more than direct expenses. Wheat and steel shipped for export from the central states are granted similar types of rate preference for the same reason.

Special Rates.—All rates for the railroads are divided between carload and less-than-carload rates. The latter is considerably higher because of the increased loading costs, handling charges, and general higher unit cost for the capital used. Because of these rate differences it behooves a shipper to concentrate his shipments in such a way that he avoids the higher charges. If a carload lot cannot be obtained the shipper should avail himself of the facilities offered by the warehouse centers and terminal shipments which group less-than-carload shipments to common points.

Rates are commonly made effective with "in transit" privileges, which permit materials to be shipped to a central market or processing point, unloaded and processed, and reloaded and shipped to the ultimate market. This is well illustrated by wheat sent from the elevator direct to a miller, who processes it into flour and then ships it to market on the single rate computed from source of the wheat to the final market. This amount is less than the sum of the rates for the separate hauls involved.

Joint rates are frequently granted by the various types of shipping so that goods may be shipped by a combination of rail and boat, for example, under a single rate that is something less than the two independent rates. This practice encourages export shipments especially. It is often used by the railroads to gain business for their routes and that of a connecting carrier. The divisions of these rates are agreed upon in conferences between the various shipping agencies involved.

Demurrage is a rental charge for a freight car which goes into effect forty-eight hours after arrival of the car at the proper siding. This charge is designed to hasten freight handling and to obtain release of the cars for other work.

Routing

Where several choices of carriers are available, the exact route of travel for a shipment must be decided by the shipper. His choice may frequently result in a saving of time, expense, and difficulty. Where time is not the first essential, it has been found,

for example, that steel destined for California can be shipped to the Atlantic seaboard, thence by water through the Panama Canal at a cost much less than the direct rail rate. Wheat from Nebraska will, in general, enjoy a much cheaper rate to Liverpool if shipped by Chicago, than if sent south through Kansas City.

The time spent in study for each specific case or general type of shipment to select the most advantageous combination from the various services and routes is amply repaid in savings effected. This matter in a large concern is the responsibility of a separate traffic department. For the small concern the problem is as important but it probably will be handled by the general manager and his shipping clerk.

Traffic Managers

Wherever the shipping problems of either buyer or seller become of sufficient volume it is economical to assign all the related questions to a traffic manager. Such a manager must have both wide experience and current knowledge on packing methods and costs, rate schedules, and shipping routes. In the case of water shipping, the additional services of brokers are commonly required to aid in chartering boats or space on them as well as in obtaining the best rates. Where exports are involved, the work often involves obtaining consular approval for shipment and for entry abroad. These details may be handled by a broker for a shipper if he has no facilities of his own.

The work of checking the bills of lading, the rates charged, and the packaging will fall upon the traffic manager and his subordinates. To handle this mass of clerical detail the operations must be organized and a personnel assigned to the work. The setup of the organization and its general supervision will be, of course, one of the responsibilities of the traffic manager.

S U M M A R Y

Many forms of transportation are available to a shipper in the United States. The contribution of all types as a national transportation system has been in the form of a country-wide exchange of products that has permitted the many gains of specialization in industry, processes, and territories. The various

forms, including the railroads, water carriers, trucks, pipe lines, and airplanes, handle the shipping tonnage in the order named.

The rate structure in the railroad system is more complex than that in the other shipping mediums, but many of the rates for the other methods depend very largely on individual bargains rather than on standard rates. The railroad rate structure has developed differences in rates due to territorial, commodity, and preferential classifications. In addition to these complexities others arise from certain joint, in transit, and export rates.

The specific routes of a shipment should be tested for the time required, the rate, the general service of the carrier, and the legal responsibility. To choose between various routes involves weighing the specific advantages of one against those of others. All of this examination requires considerable knowledge about and experience with the differences in various routes and the needs of the shipments.

A firm with a large volume of traffic should have a traffic manager specifically charged with handling all the questions pertaining to the forwarding and receipt of shipments for the concern. Though a firm may not be able to afford a separate official charged with this work, it is obvious that transportation costs and services constitute such an important part of modern marketing that it should receive close attention.

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P R O B L E M S

1. How is the development of the transportation system important for industrial and territorial specialization? Illustrate.
2. Indicate the particular fields of shipping to which the various transportation forms seem specially adapted. Explain why.
3. What advantages and disadvantages do you see in the program to develop the internal waterways?
4. Trace the probable effects of increased governmental regulation of the motor-truck shipping field. Do you find reasons for a uniform regulation of all transportation forms?
5. Indicate several ways in which the rate structure of the railroads is classified and show the importance of these facts to a shipper.
6. How can a firm afford to spend much time studying packaging, routing, and insurance for its shipments? Are any specialists available to help a shipper?
7. How do preferential rates affect the normal size of markets? Does this seem advisable?
8. Does a traffic manager have any influence on successful marketing? Explain your position. What is his relation to the purchasing department?
9. Explain the differences between straight and order bills; between railroad and water shipping bills of lading.
10. How is the use of the bills of lading related to financing the shipper? To giving the shipper security for the purchase price?
11. How will "in-transit" privileges affect other competitive advantages of a competing producer? Will joint rates lead to the same result?
12. What is the disadvantage of less-than-carload rates? Indicate various methods which may be used to obtain the benefit of carload rates.

CHAPTER XXIX

PURCHASING MANAGEMENT

FUNCTION OF PURCHASING MANAGEMENT

Management is required in making purchases as well as sales. The functions involved in purchasing management are: (1) trade contacts, (2) placement of orders, (3) traffic routing, (4) inspection, and (5) storage. This series marks the boundaries of purchasing management, and the several functions can best be studied separately.

Trade Contacts

It will be recalled that one of the functions of marketing is that of assembling. Assembling is, in effect, the work of the purchasing division of a business. The first task in assembling consists of making trade contacts and gathering information about the goods offered in the market, suggested above as the first function of the purchasing manager. Only by keeping constantly informed of changes in sources of supply, in demand, and in prices, and then selecting a source of supply which can give good service will a firm be able to purchase upon any basis of efficiency. Oftentimes supply is limited and if this foreshadows price increases, a firm should act as quickly as possible to protect itself against upward price movements. Or there may be an oversupply, in which case the firm should avoid substantial future commitments.

It is a matter of considerable importance as to what sources of supply are selected; reliability, credit terms, and volume of supply that they are able to furnish, must all be considered. A firm which purchases in sizable quantities, therefore, must maintain contacts over a wide portion of the field so that it will not become dependent upon a single source of supply and thus lose the benefit of competitive bidding.

Placement of Orders

The actual placement of orders seems a comparatively simple matter, but in reality there are many decisions involved in such an act. First of all may be the price. A variety of prices is likely to be offered the purchasing agent by various sources of supply. It will require some analysis and comparison of the items submitted and their respective prices to judge which constitutes the best purchase of the concern. A careful comparison of samples of

Nº 16143		PURCHASE REQUISITION		PURCHASING DEPARTMENT
REQUESTED BY	O.K. BY	DEPT. HEAD	DATE	DATE WANTED
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>				
STOCK NOW ON HAND	DELIVER TO		TO BE USED FOR	
DWG. No.			ACCT No	
PURCHASE FROM				
SHIP VIA				
PRICE	PER	LESS	F.O.B.	TERMS
FOR SHIPMENT FOR DELIVERY				
P. O. No.				

FIG. 43.—Purchase order form.

the material offered may be required to assure the buyer of the correct quality. Terms of credit often make a difference as to which seller will receive the order. Time of delivery may constitute an important question in order to co-ordinate the purchase with the inventory control. Some of the sources of supply may be able to meet the required delivery date and others may not. Some firms may have a reputation for promptness in executing orders; others may be known as dilatory. The choice must be based upon all these points. Only then can an order be placed that will best serve the purpose of the buyer.

Traffic

Shipment involves transportation rates, times of delivery, service by the transportation medium, and sometimes necessity

for unusual packing. These matters require study and choice.

For example, there may be a choice between shipment by rail or by truck. One may offer a cheaper rate than the other, but the matters of reliability, breakage, speed, and packing must also be considered as elements in the choice. Again, if the volume of business done by a concern is large, traffic arrangements may be made with transportation agencies that afford special rates or special service on large shipments.

The time element in delivery must be carefully fitted into inventory control and comparative information as to the various transportation methods will need to be compiled. Traffic control, then, makes it possible to specify delivery dates that will co-ordinate with inventory control.

Inspection

Adjustments.—On delivery, goods should be carefully inspected for their conformity with the terms of the order. This task falls upon the purchasing division of the business.

Where inspection discloses defects, or deviations from specifications, the purchasing manager must determine whether to accept or reject the shipment and he must make a proper claim. Sometimes a claim for partial adjustment is made, but whatever the nature, the purchasing division must secure some final adjustment. Oftentimes claims arise for damage in shipment. These claims, too, must be properly filed and followed to a settlement by the purchasing division.

Testing.—Goods and materials must be constantly tested to prove that they actually fill requirements most economically. The testing division of the purchasing department should regularly work in close co-operation with the production division to check for results in the use of materials. Results may indicate less rigid specifications with consequent savings, or call for higher standards.

Storage

Warehousing or storage of goods until they are to be utilized in production or sold is the final task of the purchasing division. It involves providing adequate space that will afford proper

protection to the goods in storage. Storage space for production goods must also be conveniently located to the departments utilizing the materials.

Storage is an expensive function in any business, for it involves capital not only for the goods themselves while they lie dormant in the warehouse but also for the warehouse space. This space represents capital investment upon which a full investment return must be earned; consequently it should be no larger than necessary. Through inventory control the items in storage can be consistently kept at a workable minimum, and storage space, too, can be co-ordinated with the current needs of the business.

The storage division is charged with keeping the inventory chart and with notifying the purchasing department when an item needs replacement. It attempts to keep at a minimum those items that are not demanded regularly and that constitute an investment of capital not being well utilized. Internal traffic in a warehouse is an additional problem, and the storage division must arrange goods so that they may be conveniently indexed and found, and also moved to other departments without confusion or delay.

AIDS IN PURCHASING MANAGEMENT

Tests for Purchases

One of the most common aids for the purchasing manager is the testing of various materials. Tests are based on production requirements, and may be made for strength, color, weight, or flexibility. If an item is discovered to be of second grade, the purchase may still be effected but on a lower cost basis than for first quality. Once established, these tests should be constantly referred to when bids are received for the placement of orders.

Ordinarily, samples of the goods to be supplied must be furnished the purchasing division for testing. A considerable number of possible vendors are often eliminated because their goods are unable to meet the test.

Specifications

Sometimes tests are not feasible, as is true in the case of large production-good units that are often made up only on order.

In such cases the purchasing division states its minimum requirements in "specifications," and sellers are asked to tender bids on that basis. Thus it is up to the seller to test his own products first, for of course the purchaser will check them to his specifications when he receives them.

Inventory Movements

As previously mentioned, control of inventory movements is a most important aid to efficient purchasing. Production requirements, the time element, and the cost element are all factors upon which the purchasing division must have information before placing orders.

POLICIES IN PURCHASING

Every purchasing manager must settle upon a policy to be followed in the routine work of purchase. Factors which will decide his policy are the quality of the goods required, the regularity of supply, and the costs.

Quality

Quality in the purchases must be in conformity with quality in the product to be manufactured or sold. Some goods are produced or sold upon a low price base, and quality, accordingly, is relatively low. Or the product may be distinctly a quality one which requires raw materials or finished goods also of the highest quality. Or the product may be neither of the highest or the lowest quality. But whichever it is, the firm must determine the *minimum quality* in its product. In purchasing it will then obviously be necessary to pay for no better quality than is required in the product, and of course no lower standard should be accepted.

Supply

The regularity and availability of goods to be purchased are important matters for the purchasing division to take under consideration. An industrial firm operating upon a regular and consistent production schedule will, of course, need material supplied on the same basis. But it may be that such materials are produced

irregularly or seasonally. This will create a question for the purchasing division as to whether the firm should purchase its supplies within the season of production and store them, or whether it should rely upon the market intermediaries for a regular source of supply. The merchant, too, often faces this same problem.

The question may then arise as to whether the material needs to be stored close at hand, or whether the periods of shipment will permit storage to be at distant points. These considerations vary for materials and kinds of product and are matters of study in any single business.

One ever-present problem is whether to purchase in small or large quantities. In the event that the purchasing agent decides upon a policy of short-time or "hand-to-mouth" buying he can reduce the amount of capital that is tied up in inventory at any one time. He can also better determine his needs and feel sure that there will be little danger that unused materials or goods will pile up on his shelves. Finally, he can insure himself against a downward movement in the price of materials used.

In most cases, however, these advantages are offset by disadvantages. In the first place, when following a hand-to-mouth purchasing policy a company always runs the risk of having production interrupted by a sudden exhaustion of the supply of raw material. In the second place, hand-to-mouth buying is not conducive to the development of broad vision, a characteristic of prime importance in modern business. Finally, the unit cost of small orders is much greater than that of large orders. Harry N. Knowlton¹ estimates that the cost of handling a small order is approximately 75 per cent of the cost of handling a large one. On the assumption that a small order is one-fifth the size of a large one, he records the experience of 115 companies. With 100 representing the cost of handling a large order, the costs of handling small orders were as follows: recording, 88; billing, 82; granting credit, 97; collecting, 101; packing, 54; trucking, 52; and shipping, 56. On the basis of his findings five twenty-dollar orders would cost about four times as much to handle as a single one-hundred-dollar order.

¹ "High Cost of Handling Small Orders," *Factory and Industrial Management*, March, 1932, pp. 105 *et seq.*

Price

Not only does the purchasing manager have to determine a particular price for any one order, but he has to decide the general question of price policy. Shall he buy from a few sellers upon a contract completely covering his requirements? Or shall his policy be to buy at market prices from any source of supply available? Market price sometimes moves erratically and one cannot always get in a buying order at the low. By buying at market prices, therefore, the purchaser runs the risk of paying a higher price than he would under contract. Again, a contract price may carry substantial discounts from the seller, granted in order to acquire a regular outlet and a steady sales volume. But ordinarily the seller will ask a price that he expects to be close to the average of the market throughout the period, and the purchaser may find himself bound to a contract at prices considerably above the current market. It is always a question as to which type of buying gives the best result for a particular business.

Authority of Agent

One of the most important problems of purchasing involves centralization of purchasing authority. Shall we put one person in charge of all purchasing or shall we allow the heads of various departments to buy for their own needs? The trend seems to be in the direction of centralized purchasing, and for a number of good reasons. In centralized purchasing the purchasing is handled by a specialist—one who devotes his full time to a study of markets and marketing methods. Responsibility for adequate supplies can be definitely fixed. Larger orders can be placed when the needs of the entire plant are cleared through one person. Standardized purchasing routines will result in savings which come from standardizing equipment and processes, and centralized information. Finally, better co-operation can be secured between a single purchasing agent and the finance officer through prompt approval of invoices to take cash discounts.

From what has been said it should be clear that the office of purchasing agent involves great responsibilities. He must have a broad knowledge of economics, economic geography, general business conditions, production problems. He must be tactful

enough to make the most of the expert knowledge possessed by salesmen. And since he is in a position to reap personal gain, he must be scrupulously honest.

S U M M A R Y

Efficient purchasing management—whether by manufacturer or merchant—is half the job of selling. Purchasing involves making trade contacts, placing orders, specifying traffic arrangements, providing for inspection and storage.

Aids to the purchasing manager are tests, specifications, and inventory control. Purchasing requires a purchasing policy which is based on quality of goods, the amount to be held in storage, and the prices to be paid. Many firms find it an advantage to centralize purchasing in a purchasing manager who is given full authority in his field, and, in the case of large firms, to create a separate purchasing department.

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PROBLEMS

1. What problems are involved in controlling inventories?
2. Enumerate the responsibilities with which a purchasing manager may be charged.
3. What values in purchasing policies can come from extensive trade contacts? How are these secured?
4. How can there be enough matters requiring the creation of traffic divisions in business firms?
5. Why are the purchasing agents usually required to supervise inspection and adjustment?
6. Enumerate the costs of storage. Under what circumstances should a firm undertake its own storage operations?
7. What advantages are there in the use of specifications? Would it be best for the buyer to use his own?
8. Why is the use of tests growing as a function of the purchasing manager? Can it be avoided by the use of specifications?
9. Is there any connection between the purchasing policies and the results of forecasting services? Explain.
10. What relationships does the purchasing manager have to the other divisions—personnel, finance, and production?

PART VI
ORGANIZATION

CHAPTER XXX

THE ADMINISTRATIVE ORGANIZATION

THE ROLE OF ORGANIZATION

In preceding chapters the discussion, for the most part, has been confined to the activities of the separate departments of an enterprise. We have attempted in those chapters to demonstrate the soundness of the principle of specialization as applied to business functions. In other words, we have seen that efficiency may best be obtained in a business enterprise by grouping all similar functions in separately administered departments. Out of the advantage that flows from the application of this principle arises a very difficult problem—the problem of co-ordination. Since all functions, however dissimilar in character, are directed toward a common end, namely, the production and distribution of goods and services, it is necessary to define their separate functions in relation to one another and to co-ordinate them in such a way that the business unit as a whole can be operated with a minimum of friction and waste. It should be obvious that the personnel functions—employment, training, welfare, joint relations, and the like—can be performed more efficiently when directed by persons giving all their time and energy to personnel problems and none to finance or production. It should be no less obvious that these personnel functions cannot be performed at all except as they are related to and co-ordinated with the functions of the other major departments—finance, production, and marketing. To illustrate, the personnel manager is charged with the responsibility of hiring workers, but they are workers for the department of production. His position exists because modern production demands careful worker selection. Moreover, production methods themselves greatly influence the nature of personnel problems. Where workers are driven at breakneck speed all day long, or where the tools and equipment are in such poor condition that they make it difficult for the workers to earn adequate

wages, or again, where the year's production is so poorly planned that workers are never sure from one week to the next how long their jobs will last, the difficulty encountered by the personnel manager in securing and maintaining an efficient and contented labor force becomes very great indeed.

Definition

It is this function of co-ordination that is performed by *organization*. We may define organization as the determination and definition of the relationships (1) among all of the separate business functions to be performed and (2) among the persons chosen to perform these functions, in such a way as to facilitate joint action without friction or duplication of effort. It should be clear from this definition that organization is a complex of many factors. It involves, first, the determination of the business functions to be performed; second, the identification of persons with the functions; third, the allocation of authority and responsibility; and finally, the definition of relationships that are to exist among the different functions and the different individuals. Let us illustrate. Suppose, for the moment, that we have decided to establish a large garage and automobile service station close to the campus. Obviously one of our first considerations will be concerned with the functions to be performed. What is involved in the day-to-day operation of a garage and service station? After discovering the answers to these questions we meet others. Who of our personnel is to be assigned to each of the functions to be performed? Following this, since we, as owners, shall be unable to supervise every activity every day, we shall have to pick out certain individuals to whom we will give authority and upon whom we would place responsibility for supervision. Which person is to be given the authority and held responsible, for the purchase of automobile accessories? Which person will be responsible for an adequate supply of repair materials, new tools, and so on? Finally, we shall find it necessary to determine the relationship between the several functions to be performed and between all of the individuals employed. What relationship, speaking in terms of authority and responsibility, is to exist between the person who purchases automobile supplies and the person responsible for an adequate stock of repair materials and tools?

Are they on the same or on a different level of authority? What relationship is to exist between these persons and functions and the treasurer of the enterprise? Under what circumstances will the person in charge of automobile supplies be expected to confer with the treasurer? If we suppose that disagreements develop between two persons in the business, whose opinion will carry greater weight and to whom will these persons make an appeal for an ultimate decision?

These are some of the questions that would inevitably arise if we were to start such an undertaking—questions that would have to be answered before we could lay in our supply of goods, before we could accept orders, and before we could furnish goods or services to our customers.

The Importance of Organization

As one observes the daily routine of the small retail establishment that is owned and operated by one man, the problem of organization does not appear difficult. The man and the business are one. Unity of purpose and action exists in his own person. "There is no indefiniteness as regards authority and responsibility because they rest in him except as he delegates them specifically, and as far as administration alone goes, he is sure of *esprit de corps*, co-operation and team play, because the units to be harmonized are already one."¹

As one approaches a business employing many persons, the importance of organization becomes at once apparent. To be sure, the owner of a business employing two or three workers may never have set himself to the task of constructing an organization chart on which are shown the functional relationships and the flow of authority between himself and his workers. It may be unnecessary for him to do so if he is able to retain in his mind a complete picture of all functions to be performed and their relationships. But the fact remains that, even here, some organization, however simple, is necessary. There is work to be done and if it is to be done efficiently it must be done by persons who are informed with respect to their relationships to the other persons, and their functions in the enterprise.

¹ Russell Robb, *Lectures on Organization* (privately printed, 1910), p. 48.

But let us consider another type of business—a type that has been developing in this country for a generation at least and in which the importance of organization is apparent from the most casual observation. Let us consider the big business enterprises that employ hundreds or even thousands of men—enterprises which spend enough money in the course of a year to have supported all of Caesar's armies in his most strenuous campaigns. One of these enterprises may be housed in four or five or even a dozen buildings and it may produce a great variety of products. How, under these circumstances, can the owners and managers assure themselves that the persons employed will act and think cohesively? How can they assure themselves that the host of functions will be performed? Workers have to be selected and trained, costly equipment must be purchased, installed, and operated. Funds must be raised for a building program, outstanding bills must be collected, prices must be set, wages must be paid, obligations to other business establishments must be met, raw materials and tools must be purchased, the raw materials must be routed through the plant, methods of performing each manufacturing process must be determined, machines must be kept in repair, the finished goods must be sent to storage or otherwise accounted for, records and accounts must be kept, and disputes that arise daily must be settled. Market areas must be determined, advertising campaigns must be planned, the goods must be sold, packed, insured, and shipped. If these functions are to be performed efficiently, or indeed if they are to be performed at all, it is obvious that some substitute must be found for the simple unity that can be observed in the one-man business already described. Organization is the substitute.

Theory of Organization²

As is true in all business activity, a body of theory is used either as a basis for new business practice or as a means for rationalizing practice of long standing. This is notably true in the case of organization for administration, in which we find two

² See The Taylor Society, *Scientific Management in American Industry* (Harper & Brothers, 1929), p. 136.

bodies of theory. There is one group of persons whom we may designate as the *planless organizers*, whose organization theory (if not a rationalization of careless practice) probably arises out of a staunch belief in individual initiative and freedom. Briefly, this group holds that an organization should be allowed to grow, like Topsy, with a minimum of direction and restraint. They reason somewhat as follows: Business is primarily interested in securing and developing able men with strong and dominating personalities. If an organization is rigidly formed, that is, if the duties and the authority of each person are carefully defined, the strong men may not be allowed to develop as they would if they were free from the restraint of carefully planned organization.

While there is no question about the desirability of having strong and able personalities in the executive positions of a business enterprise, we should point out certain disadvantages arising from the "survival of the fittest" philosophy. In the first place, a dominating person may not possess the qualities of good leadership. He may have a highly developed sense of authority but no correlative sense of responsibility. In the second place, in the absence of carefully defined relationships between functions and persons, one person may find that more functions have accrued to him than can be properly handled. In every business will be found people with more duties than they can manage efficiently. Many others are forced to undertake the performance of new functions before they have completely mastered the old. Third, this lack of organization makes it impossible to measure accomplishment accurately. This arises from the fact that responsibility may be shifted from person to person, so that authority belonging to one person may be improperly assumed by another. In the fourth place, little stability or permanence characterizes the business enterprise in which dominating persons are allowed to assume the authority for a great many functions. For example, the death of a key man frequently leaves a great many persons and functions without guidance or co-ordination. And, finally, in the absence of any tangible evidence of carefully defined organization, backsliding occurs. With the passage of time people become careless in the performance of duties. The nature of their functions change and unless great care is exercised in the periodic

re-examination of duties to be performed, the total efficiency will be greatly diminished.

A second group of persons, to whom we may refer as the *organization planners*, believe in the subordination of the individual in the interest of the business welfare. They believe in planning for long periods and in systematic co-ordination. Members of this group see the necessity for constant and painstaking examination of the relationships that exist among all of the different functions to be performed and recognize the necessity of recording these relationships in some permanent form. They recognize that the inevitable growth and change in business make constant re-examination of an organization necessary if they are to avoid duplication of effort, conflict of authority, overloading of the willing, and underloading of the unwilling. They recognize the human inclination to relax and to backslide in the absence of persistent direction. They see, therefore, the necessity, not only for defining jobs and functions, but for having some tangible evidence of these definitions, usually in the form of organization charts and manuals of instructions.

This group would insist that people maintain the relationships among the functions, and it recognizes that successful maintenance of the organization will depend, in part at least, upon the establishment of methods of free communication among all persons working in the organization. These communication devices are usually in the form of committees and grievance machinery. Needless to say, our interest is confined to the "organization planners."

T Y P I C A L O R G A N I Z A T I O N S T R U C T U R E S

The organization structure—the specific arrangement of functional and personal relationships—necessarily varies from enterprise to enterprise, depending upon local conditions. It is possible, however, to construct typical organization structures of which almost all of the present organization types are modifications. Examples of organization types discussed in this chapter will be confined to (1) the military or line type; (2) the line and staff type; (3) the functional type; and (4) the committee type.

Military or Line Organization

The *military* or *line* organization gets its name from the fact that it is typical of army organization. The most striking characteristic of the line organization is the direct flow of authority in pyramid fashion from the highest executive in the business down through inferior executives and finally to the working

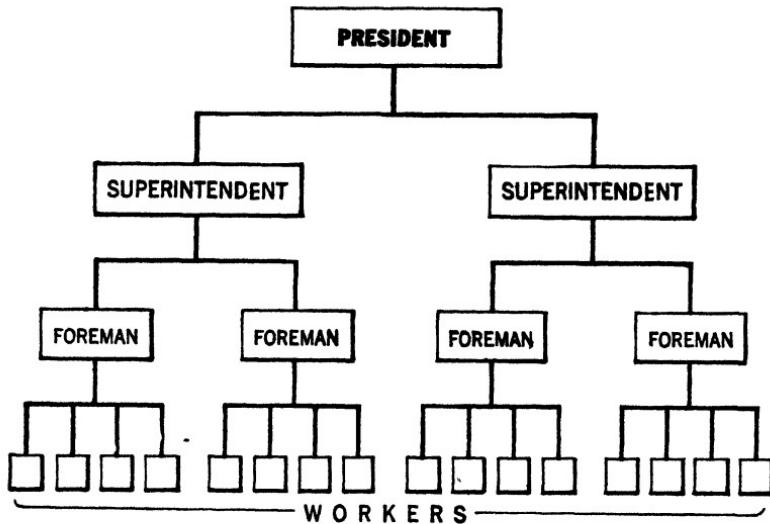


FIG. 44.—Military or line organization.

force. This type of organization is a logical outgrowth of the master-and-servant relationship in which all activities are directed by and all authority is concentrated in the master; it is the type most frequently found in small business today. As the organization grows it becomes necessary to add minor executives, foremen, and supervisors, but the owner continues to direct all activities—personnel, finance, production, and so on—using the subordinates largely as enforcement agents. Foremen and supervisors are responsible for the discharge of all activities involved in the immediate supervision of workers. Foremen are directly responsible to managers, who in turn are directly responsible to higher executives and finally to the owner or executive officer.

'The chief advantage of the military type of organization

structure is the fact that responsibility is definitely fixed. Since each subordinate knows exactly the superior from whom his orders are received and to whom he must report his progress and his failures, "passing the buck" is avoided. But this advantage is offset in many instances by obvious weaknesses in a large organization. (1) Each foreman, major and minor executive, and even the owner-president becomes a sort of "jack-of-all-trades" with no opportunity to develop specialized knowledge. (2) As we progress from the bottom to the top of the pyramid, activities involving both authority and responsibility become unduly concentrated until the major executives and the president are faced with an almost impossible task. Examination of countless reports coming from a great many subordinates and the making of detailed decisions preclude successful performances of the very important function of policy determination.

This type of organization structure, illustrated in Figure 44, is used most successfully in the small business enterprise.

Line and Staff

The *line and staff* type developed as the disadvantages of the line type of organization became more and more apparent. With the growth in the size of business establishments, the necessity for delegating certain activities to specialists became apparent. In the absence of specialists, the highest executive became burdened with the details of a wide range of activities without being expert in any one and without having time for general administration. A *staff* of specialists was therefore added, each of whom gave his entire attention to the administration and management of a homogeneous group of activities. For example, an engineer to supervise machine and product design and a personnel manager assigned to labor and industrial relations left the production manager's time free to supervise the actual fabrication of the product. In theory each staff member was given complete authority with respect to policy and method in his own field, but in practice, as day-to-day problems arise, each confers with the chief executive as well as with other line and staff executives. Figure 45 illustrates this type of organization.

Typically the line or military type of organization is retained

in the production department, with an added staff for personnel, finance, accounting, engineering, sales, and advertising. Because of the greatly increased industrial effectiveness due to the utilization of specialists, the line and staff type has become the most commonly used form of organization.

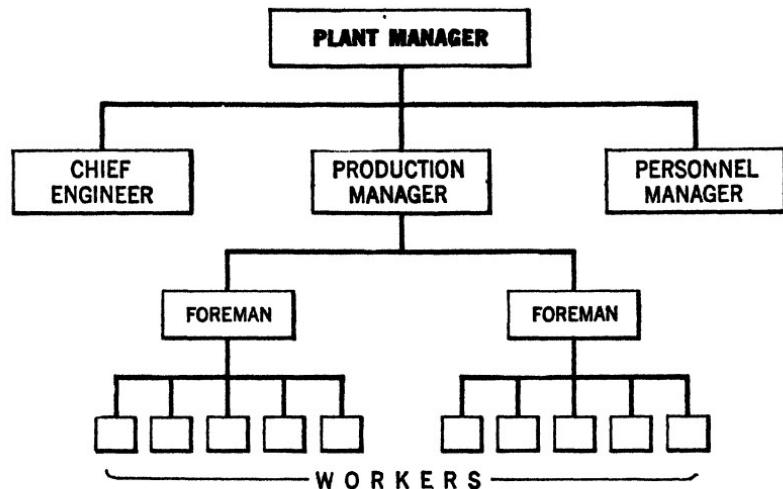


FIG. 45.—Line and staff organization.

Functional Organization

The *functional* type of organization, developed by Frederick Winslow Taylor in the steel industry about fifty years ago, represents an attempt to utilize completely the principle of specialization. It was Taylor's conviction that undue concentration of activities in the hands of factory foremen should be avoided wherever possible. In support of his position he enumerated the wide range of duties a foreman in charge of a battery of lathers and planers was called upon to perform, and the qualities necessary for successful performance.

First. He must be a good machinist—and this alone calls for years of special training, and limits the choice to a comparatively small class of men.

Second. He must be able to read drawings readily, and have sufficient imagination to see the work in its finished state clearly before

him. This calls for at least a certain amount of brains and education.

Third. He must plan ahead and see that the right jigs, clamps, and appliances, as well as proper cutting tools, are on hand, and are used to set the work correctly in the machine and cut the metal at the right speed and feed. This calls for the ability to concentrate the mind upon a multitude of small details, and to take pains with little, uninteresting things.

Fourth. He must see that each man keeps his machine clean and in good order. This calls for the example of a man who is naturally neat and orderly himself.

Fifth. He must see that each man turns out work of the proper quality. This calls for the conservative judgment and the honesty which are the qualities of a good inspector.

Sixth. He must see that the men under him work steadily and fast. To accomplish this he should himself be a hustler, a man of energy, ready to pitch in and infuse life into his men by working faster than they do, and this quality is rarely combined with the painstaking care, the neatness and the conservative judgment demanded as the third, fourth, and fifth requirements of a gang boss.

Seventh. He must constantly look ahead over the whole field of work and see that the parts go to the machine in their proper sequence, and that the right job gets to each machine.

Eighth. He must, at least in a general way, supervise the time-keeping and fix piece-work rates. Both the seventh and eighth duties call for a certain amount of clerical work and ability, and this class of work is almost always repugnant to the man suited to its minute detail.

Ninth. He must discipline the men under him, and readjust their wages; and these duties call for judgment, tact, and judicial fairness.⁸

After listing these duties Taylor made the accurate observation that a foreman having all of these qualities should not be a foreman but a superintendent instead.

As a solution to this problem Mr. Taylor suggested that the duties usually performed by the typical line foreman be divided among a number of men whose duties are differentiated in such a way that each becomes a specialist with authority over a larger number of workers but in a restricted area of activity, as shown in Figure 46. There might be, for example, a foreman in charge

⁸ Taken from F. W. Taylor, *Shop Management* (Harper & Brothers, 1911), pp. 96-98.

of personnel and discipline, another in charge of maintenance and repair, another for time and pay rolls, and so on. The advantage of this type of organization structure should be apparent from what has already been said. Increased efficiency is secured by fur-

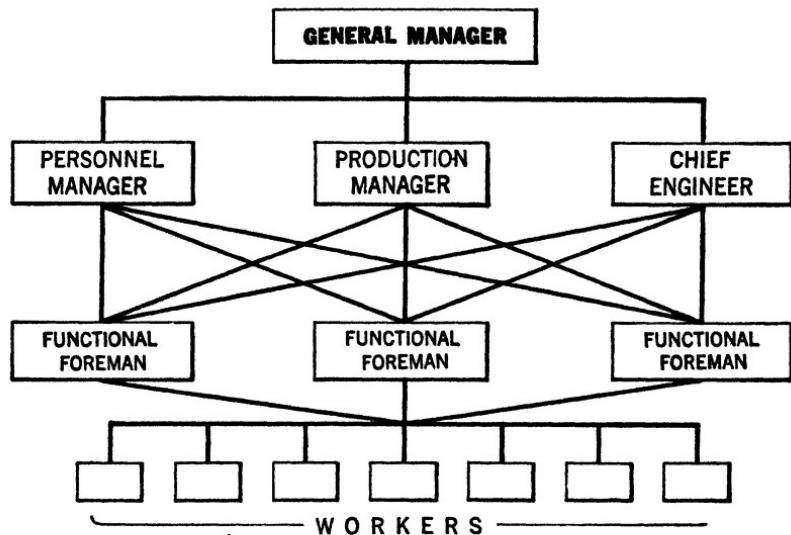


FIG. 46.—Functional organization.

ther breaking down a job into its component parts and by further division of labor.

While Taylor's suggestions have had a far-reaching influence on American industry, many industrial leaders are convinced that a man cannot successfully work under two or more bosses at the same time. It is objected, moreover, that the added efficiency does not justify in most cases the increased indirect expense of supervision. Finally, it should be observed that the Taylor system is most readily adaptable to shop conditions and cannot, except with difficulty, be applied to most of the other units in a business organization.

The Committee Type

Since all industrial problems are many-sided, and since accurate solution in most cases requires a breadth of vision and a background of knowledge rarely developed by the experience of

one man, a fourth type of organization, the Committee type, has been developed. In its structural formation it need not differ from the types already described, but it does differ in the respect that a committee of men replaces the single individual in each of the executive positions. In accordance with the advice contained in one adage, it substitutes two or more heads for one.

The advantages of this type should be obvious. Decisions are necessarily impersonal and, as D. S. Kimball says, they assume the character of the verdict of a jury. The information and suggestions offered by the committee members are subjected to the searching scrutiny of each of the other members, a practice that is designed to discourage the display of prejudice and pettiness. In the second place, committee meetings promote understanding and harmony among members who represent various departments and conflicting points of view. The give-and-take discussion characteristic of committee meetings tends to clarify issues and to encourage more serious consideration of new and different viewpoints.

These advantages, however, should not blind one to the disadvantages of the committee type. Viewed in terms of speed of action, leadership, and inspiration, the committee cannot compare with the personality of a strong individual. The committee, if large, may become difficult to handle, and some members may be inclined to consume committee time by airing personal prejudice and displaying forensic ability.

PRINCIPLES OF ORGANIZATION

As has already been observed, there is no single type of organization structure that can be used in every industrial situation. The specific functional and personal relationships vary according to the specific problems to be solved. Differences in the size of the plant, the goods and services produced, the character of the personnel employed, and even the geographical location of the business necessitate many variations in organization structure. Despite the accuracy of these observations, however, whatever the specific situation involved, there are a number of organization principles of general application that must be borne in mind by

persons constructing a new organization, or remodeling an old one.⁴

1. At the outset, it is necessary to determine the specific nature of operations to be performed by the business. With the greater relative importance of technical detail in an establishment manufacturing electrical equipment, the problems of organization and their solution necessarily differ from these in a department store. The department store makes only incidental use of engineering services, but in the electrical manufacturing concern the engineering division becomes as important as the sales or personnel divisions.

2. The main lines of business activity should be designated and clearly defined. Typically the broad lines of a business will be drawn between finance, personnel, production, and marketing activities. These, in turn, are usually divided into smaller groups of homogeneous activities. For example, marketing is usually divided into the sales and advertising divisions.

3. All activities should be so grouped that each executive is charged with the direction and supervision of a homogeneous group of functions. This is, of course, an application of the principle of specialization to management functions.

4. The authority incident to each position, the power to exercise control and to require action, must be carefully defined. Neglect in this respect will result in frequent conflicts between persons who, in the absence of careful definition, will claim authority in the same fields of activity. The ultimate results of such a situation in terms of lowered employee morale are extremely harmful.

5. The responsibility incident to each position, the accountability of one person to another for the satisfactory performance of designated duties, must be clearly outlined. Accurate assignments of responsibility not only serve as an incentive to subordinates to discharge their duties efficiently but also speed up the performance of duties. Each person is constantly reminded of his specific duties and of the persons with whom he is to consult in the event that questions of policy or practice arise. The constant

⁴ Adapted from Metropolitan Insurance Company, Policyholders' Service Bureau, Bulletin No. 3. See also, L. V. Estes, "Managing for Maximum Production," *Industrial Management*, Vol. LVII, p. 174.

reminder of responsibility, moreover, stands as an effective guard against misuse and abuse of authority.

6. Concentration of too much authority or too many activities in the hands of a single executive should be avoided. In the interest of efficiency, the burden of administration and supervision should be equalized as far as possible. In the event of

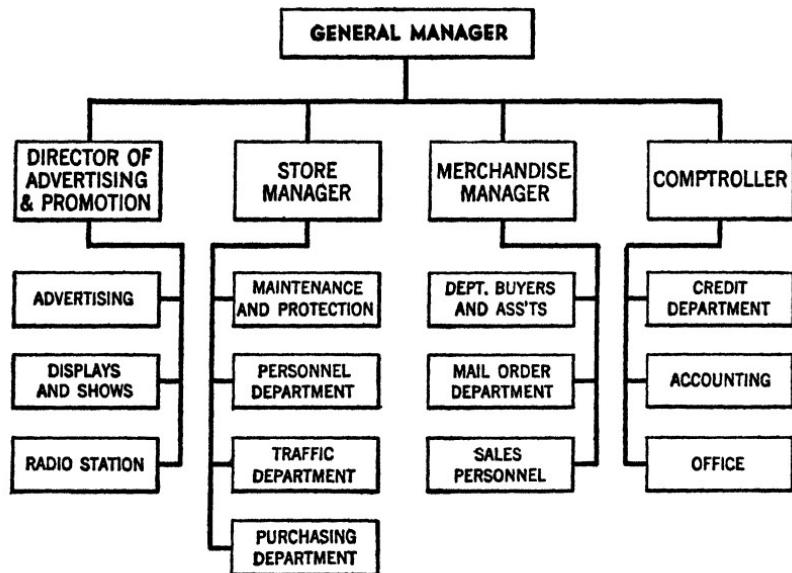


FIG. 47.—Typical department store organization.

undue concentration many functions may be neglected because of pressure of time, and the death or withdrawal of the executive involved may result in releasing a great many activities to be guided by inexperienced hands without proper co-ordination.

7. It is necessary that final authority be provided at all points where decisions are to be made and where action is to be taken. It is necessary, in other words, to provide sufficient authority at the proper places to allow each person to discharge his responsibility quickly and effectively.

8. In order that each function will be performed as satisfactorily as possible with the available talent, the personnel should be assigned to positions according to demonstrated capacity. The

effectiveness of any organization depends greatly upon proper placement of the personnel.

9. Dual subordination should be avoided wherever possible, thus eliminating the difficulties involved when an employee finds himself in the service of two or more masters.

10. The number of subordinates reporting to one superior should be reduced to a minimum. This is a variation of the principle that undue concentration of authority and activity in the hands of one executive should be avoided. An illustration of the possible danger of this situation is to be found in the case of the executive who is forced to spend most of his working hours reading reports submitted by subordinates, leaving almost no time for the more important task of planning.

11. Since all persons and functions in a business enterprise are working toward a common end, provision must be made for co-ordination of the various phases of the business. This necessitates the establishment of horizontal avenues of communication, frequently through the use of committees, between the responsible executives of the various departments. This point is elaborated in some detail in the following chapter.

12. Adequate incentives, both material and nonmaterial, should be supplied to insure fullest possible utilization of available talent. Human beings like to work for some definite objective or incentive. The promise of possible pay increases, profit sharing, and promotions will go far to eliminate "soldiering" and general stagnation on the job.

13. It is necessary to weed out or modify dead-end or blind-alley jobs, because workers who find themselves without the prospect of advancement are likely to become company drudges.

14. In order to maintain harmony and to stimulate efficiency some provision must be made for the free flow of suggestions and grievances from subordinates to superiors. All employees like to feel that their own work is of sufficient importance in the operation of a business to have their complaints given prompt attention. They are equally eager to have their suggestions for improvement given serious consideration.

* 15. The danger of excess organization and division of labor is ever present. The principle of specialization is subject to the operation of the same law of diminishing returns that affects land

or capital. In other words, division of authority and responsibility into minute parts requires additional personnel and greatly increases the difficulties and costs of supervision and co-ordination.

16. Periodic examination of the organization is essential. Change is certain. With the passage of time there is an accretion of duties at some points and a dissipation of duties at others. Organization balance is maintained only at the expense of vigilance.

S U M M A R Y

Since the successful operation of a business necessitates the performance of a wide variety of functions, usually involving the work of many persons, great care must be exercised to assure proper co-ordination of these functions and persons. This co-ordination function is the role played by *organization*, co-ordinating the functional and personal relationships in a business in such a way that the broad aims and purposes of a business can be accomplished without friction and duplication of effort. Organization is the business counterpart of teamwork.

While the aim of organization is always the same, the types of organization differ according to the degree to which management specialization seems desirable, the size of the business enterprise, and the character of the processes involved. The *military* or *line* type is characterized by little management specialization. Decentralization of authority and responsibility are secured by the use of the *line* and *staff* and *functional* types of organization, in the order named. A variation in the structural formation is found in the substitution of committees for individuals in the performance of the various functions.

Regardless of the structural characteristics of an organization, there are many universally accepted principles that must be observed in the construction or remodeling of an organization. Not the least important of these is the necessity for periodic re-examination of organization relationships—a principle recognizing the persistence of change and the imperfection of man.

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Article

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P R O B L E M S

1. What is meant by the term *organization*? How does it differ from management? From administration?
2. "Organization is impersonal. Management is personal." Explain.
3. "The chief difficulty with organization is to be found in the fact that it introduces rigidity into a business enterprise. It doesn't allow for the free and unrestricted expansion of natural leaders." Do you agree? How would you answer this statement?
4. Describe the military type of organization. What one word seems to characterize this type best?
5. "The person who discovered the functional type of organization merely carried the reasoning behind the line and staff type to its logical conclusion." Demonstrate the truth or falsity of this statement.
6. Prepare a list of reasons showing that there is no one type of organization which can be used in all situations.
7. What type of organization would you recommend for the following enterprises : (a) flood relief work, (b) selling bakery products from house to house, (c) retail selling in a large scale, and (d) conducting research business cycles.
8. Draw an organization chart of (a) your fraternity and (b) your college. What changes would you recommend? Give specific reasons.
9. What type of organization is used by our Federal government? Would you recommend any changes?

10. "Authority and responsibility must go hand in hand." What difficulties might result if this injunction were not obeyed?

11. "It is nonsense to talk about undue concentration of activities. If a person is able to handle his work efficiently, it should be concentrated." Comment.

CHAPTER XXXI

CO-ORDINATION OF ORGANIZATION FUNCTIONS

System

In the preceding chapter the importance of defining the duties of every person in the organization—his authority and responsibility—was emphasized. As noted there, the primary purpose served by organization is to accomplish this careful definition of individual job duty as well as to clarify the inter-job and inter-departmental relationships. It should be obvious, however, that a mere definition is not sufficient. If the broad aims of the business enterprise are to be realized, the separate functions must be co-ordinated into an integrated whole. The static relationships established in the organization must become dynamic with the day-to-day operations of the business. That is to say, it is not enough that job relationships be defined; force and intelligence must be injected into the relationships and arrangements must be made that will enable the persons in each job to know *how* these relationships are to be maintained under the pressure of the day-to-day work. A business organization is like an idle motor. It is useless until the separate parts start working together to accomplish a single purpose, and likewise in both, some means of assuring their working together must be devised. In the motor screws, bolts, and nuts are used. In business we use *system*.

It is, of course, true that strong personalities in the business are able to co-ordinate their own activities with those of other persons. They seem to have no difficulty in co-ordinating the functions of persons working under their supervision, but reliance upon strong personalities has two fundamental weaknesses. First, it fails to give stability to a working organization. Since frequently the strong personality may be withdrawn from service in the enterprise by death or otherwise, leaving the functions under his supervision wholly without a co-ordinating influence.

In the second place, co-ordination by personality fails to establish standardization of procedure, without which few businesses can operate successfully. The variation of practice from one department to another and from one day to another can result only in confusion and unreliability.

To correct these evils, most enlightened executives introduce *system* into a business, which may be defined as all of those methods, routines, and practices by which the objects of an organization are attained in an orderly way. It refers to preplanned co-ordination of all functions within a single business enterprise. The relationship between *organization* and *system* can be succinctly stated as follows: a business is managed *through* organization and *with* system. In other words, organization indicates *what* work is to be done and *who* is to do it, while system indicates *how* the work is to be done. Among the more frequently used tools of co-ordination are (1) organization charts, (2) written instructions, (3) reports, (4) record forms, (5) standard practice instructions, and (6) committees.

Organization Charts.—As described in the preceding chapter, the organization chart shows the functional relationships throughout a business enterprise—that is, it defines accurately the list of functions involved in every position, the limits of authority for each position, and the extent of responsibility for each function involved. The reader might well refresh his memory by re-examining one or more of the charts shown in the preceding chapter.

If displayed permanently in a prominent position, this graphic picture of the organization serves as a constant reminder to every person in the business of his relationship to every other person and position. The likelihood of proper co-ordination of functions is greatly increased. "Blind alley" jobs are revealed and can be picked out easily for elimination or special treatment. On the showing of job relationships, management is guided in the development of a training program for its personnel, and what is of equal if not greater importance, each employee, supervisor, department head, and executive can discover the promotional possibilities from his position and can arrange his self-training accordingly. Finally, such organization charts are of great assist-

ance in the remodeling of old organizations and in the construction of new ones.

Written Instructions.—As a business develops and becomes more complex in terms of both number of functions performed and number of persons working, it becomes increasingly difficult and finally impossible for the manager to maintain personal contact with every subordinate. He can no longer give orders and directions to every employee personally. Nor can he, if he values accuracy and definiteness as organization characteristics, safely have his orders relayed by word of mouth down through a succession of subordinate executives. He must therefore develop a system of *written* instructions, which are generally made on printed forms so that the amount of information written in by hand is reduced to a minimum. These orders are sent along the proper route, being checked and approved by the persons concerned, and finally arrive in the hands of the person immediately responsible for their execution.

Although these order forms vary greatly in character from plant to plant and according to the type of work involved, they are always concerned with what and how work is to be done. Figure 48 is an illustration.

The value of this part of business system should be obvious. Printed instructions give definiteness to a work program—that is, a manager is assured that his directions will reach their destination without distortion and will be interpreted without confusion. Duplicate copies of all orders and instructions provide a record of all such memoranda. Moreover, written instructions and directions enable a manager to detect error and negligence and to place the responsibility where it properly belongs. Finally, a system of written orders that have to be signed or initialed by the persons issuing the orders stands as a valuable deterrent against hasty judgments. When people are required to sign their names to documents of one sort or another they are generally more deliberate in their action.

Reports.—Typically a report is the formal response to the written instructions. Whereas the order directs what, where, and how the work *is to be done*, a report indicates what, where, and how the work *has been done*. The reasons for written instruc-

tions and orders, therefore, are valid in establishing the case for written reports. Increasing business complexity makes personal reporting impracticable. In making his written report to a superior executive, the subordinate is giving evidence of responsibility.

X453	No. 258743	
TOOL ORDER		
Clock No. _____	Tool No. _____	
Dept. _____	Date _____	
Quantity	Size	Kind of Tool
NOTICE TO WORKER		
<p>This tool is in your charge until it is returned. If the tool is lost it will be charged to you. Keep this slip until the tool is returned. Then exchange it for a receipt.</p> <p>This order for one item only. Signed _____</p>		

FIG. 48.—Tool order form.

carefully discharged—written evidence not subject to the distortion of a verbal accounting.

There are reasons for reports, however, that do not apply directly to written instructions, and that are of sufficient importance to warrant mention at this point. It is almost universally true that every department has information that, aside from purposes of control within the department and by superior executives, is of interest and use to persons in other departments of the business. Through its contacts with the public the sales de-

partment, for example, gets information about consumer choice and complaints that is of great use to the production department. The production department has information concerning changes in work process, and the sales department has information about fluctuations in demand that is of inestimable value to the personnel department in developing its training program and in budgeting its labor needs from season to season. This information is more useful and reliable if it is transmitted in the form of written reports.

There is a great store of information concerning working conditions, condition of equipment and raw material, incidental damage to tools, irritating work rules, and worker attitudes that can be gathered only by constant association with employees in the working environment and that is therefore not accessible to executives on their casual and infrequent inspection tours. Executives must rely upon periodic reports from foremen and department supervisors for this information.

That the subjects to be reported upon are many and various the following sample list of subjects frequently reported will indicate.¹

1. Orders—the number and value for each product sold and for each market area.
2. Production—quantity and cost, by department.
3. Shipment of goods—quantity, value, method and cost.
4. Unfilled orders—number, value and reasons.
5. Man hours worked—by department and time period.
6. Machine hours—total and per cent of capacity.
7. Labor supply—sources and turnover.
8. Inventory—amount on hand and purchases.
9. Inspection activity—spoiled and second-grade products.
10. Industrial accidents—frequency and severity by department.
11. Finance and accounts.²

Traditionally reports flow from minor executive to superior executive. It is, however, no less important to have reports flowing in the opposite direction, that is, from executives down to the rank-and-file employees. To be sure, most workers do not

¹ Adapted from M. T. Copeland, *Business Statistics* (Harvard University Press, 1919), p. 553.

² See discussion in chapter on finance at p. 168.

invest money in a business, but they do invest their time, talent, and energies. Workers therefore have an interest in information concerning company history, growth, and achievements. They want and need to know about the company's products, its financial structure, its markets, and its relationship to the public, to its competitors and to the state. It is essential that employees learn of any change in their relationship to other departments of the business. Reports covering these topics may be given to employees in the form of handbooks, bulletin board notices, mimeographed sheets for general distribution, or they may come through avenues established by employee representation plans or outside labor-union agreements.

The greatest danger in a system of reports is overdevelopment. A business executive's time is valuable—much too valuable to be spent in poring over long reports of slight, if any, practical value. If an executive finds himself increasingly burdened with endless reports, the chances are that when he finds how many hours of fruitless examination they entail, he will neglect them all. As a consequence, his desk will be stacked with unread reports, both useful and useless, and he will lack the guidance of the really valuable ones.

Another danger signal of a reporting system is duplication. Obviously, where two, three, or four persons submit reports covering the same material, the time of the reporting subordinate is wasted in preparation and the time of the executive is needlessly consumed. Careful development of organization, together with accurate definition of responsibility, should avoid this mistake.

Reports should be concise. The summary of facts and the recommendations, if any, should be stated as briefly as possible in the beginning, and should be followed by a sufficient elaboration of detail to make the report complete and convincing.

Record Forms.—The basis of reports, and therefore a very important part of business system, is to be found in the records kept of day-to-day and month-to-month business activity. Records are the living evidence of business experience. When business was less complex and was confined for the most part to local markets, very simple records of sales, costs, collections, and obligations were sufficient. As territories became increasingly spe-

cialized industrially, as sources of supply became more and more localized, and as competition for widespread markets became more severe, additional records of a more detailed character became necessary. Demand fluctuations must be anticipated, sales quotas must be established, trends in raw material sources must be recognized, cost differentials existing between various departments and in the same department from one time to another must be explained. Manufacturers, wholesalers, and retailers must know their costs of production and distribution, and must be informed immediately of any changes that seem imminent. Company records constitute the source of this information, and serve as the foundation of business planning.

The following records will be found in the typical business enterprise of today: (1) Sales for the business as a whole, by district and for each individual salesman. This information will generally be recorded by day, week, month, and year. Sales returned and allowances made will also be included. (2) Production costs will be recorded for overhead, material, direct and indirect labor; successful operation will depend, in part at least, upon a further breakdown of items into machine cost, depreciation, and the like. (3) The purchasing department will keep detailed records of stock on hand, amount purchased, and costs. Other purchasing records consist of supply catalogues, requisitions for materials and supplies, orders received, and delivery dates. (4) The personnel department will record applications for jobs, source of labor supply, labor turnover, accidents and sickness, wage changes, time worked per man, worker complaints, cost of training, and so on. (5) The department charged with the responsibility of keeping company accounts will have records of collections and disbursements, profit and loss, and special cost and loss reports.

Records should be of uniform size wherever possible to facilitate handling and filing. The form should be so drawn as to make the important summary information stand out at a glance. To insure standardization of recording the forms should be printed. This will save time in recording and will minimize the danger of personal interpretation. Since the preparation and storage of records is costly, great care should be taken to elimi-

nate useless information. Above all, records should be prepared in such a way that they will indicate trends.

Standard Practice Instructions.—Successful operation of a business depends not only on the definition of functions, the issuance of orders, the development of records and reports, but also on the determination of the one best way of utilizing these things. That is to say, in the everyday operation of a business there are countless functions that have to be performed. Obviously, there is in all cases a choice of methods to be used in their performance, but in most instances there is, if it can be determined, one best way. One of the basic functions of management is the determination of the best method of procedure and the dissemination of this information to the entire personnel through *standard practice instructions*.

It should not, of course, be assumed that the best method is always the quickest one. Speed of operations is, to be sure, an asset in a business enterprise, but not in those cases where accuracy and thoroughness are sacrificed or where the requirements of all interested departments are not considered. For example, one of the buyers of a large chain of grocery stores may be convinced that the price of canned vegetables and fruits will soon be increased. Moreover, he may feel that efficiency demands the immediate purchase of a very large quantity of these goods. In the interest of speed he might place an order for several thousand cases of canned goods with an aggregate value of \$25,000 without consulting other persons in the organization. This method might be the quickest, but it is certainly not the best, since other persons in the organization, no less interested than the buyer, would have had no opportunity to check and approve the purchase. Subsequent difficulties with the treasurer and perhaps with the manager of storage would inevitably result.

Out of the example just stated emerges the first reason for the development of standard practice instructions. If the definition of authority and responsibility outlined in the organization chart is to apply, management must develop some means of assuring itself that all orders will flow through the proper organization channels.

The second reason for standard practice instructions is to be

found in the necessity of accurate description of methods of procedure. In the case of a material or supplies requisition, this may involve only the designation of certain forms to be filled out and a description of the organization routes to be followed in securing the approval and co-operation of all necessary persons.

THE A. B. SEE COMPANY

Instruction Order No. Date.....19....

Subject: Cost Estimates.

All inquiries for quotations for special work will be sent to the Vice-President in charge of production. They are then to be sent to the Works Manager for the estimate of costs. All cost estimates are to be checked by the Chief Engineer and the Production Manager.

These cost estimates are to be sent to the Cost Accounting department where they are to be checked against our actual cost experience on similar manufactured articles. They are then to be returned to the Vice-President in charge of production who will relay the information to the prospective purchaser.

Signed: _____

Approved: _____

FIG. 49.—Standard practice instructions.

Or, in the case of bench assembly work, it may involve a detailed outline of the position of manufactured parts on the bench and an elaborate description of the movement of the hands. Standard instructions of this kind are usually based upon time-and-motion studies.

Several advantages flow from the use of standard practice instructions. Since they are written, there is little chance that they will be misunderstood or forgotten. They assure uniformity of practice throughout a plant, without which uncertainty and unreliability become evident. They make it possible to fix responsibility definitely, and they assure sufficient authority to allow responsibility to be discharged. When they are accumulated in an easily accessible file they stand ready for reference when questions of procedure arise. Finally, since they describe in some detail the content and method of work for all positions, they serve as an invaluable aid in the development of training programs.

These advantages, however, will accrue only if certain warnings are heeded. The usefulness of standard practice instructions is greatly reduced if instructions covering the same subject matter issue from more than one source. Aside from the waste of duplication, the inevitable conflict in instruction detail invariably results in increasing disregard for both. The same thing happens when standard practices are subjected to frequent change. This difficulty can be obviated by the exercise of great care in preparation.

Committees.—One of the most essential co-ordinating mechanisms in a business enterprise is the committee system. As was noted in the preceding chapter, all business problems have many sides, and where the principle of specialization has been applied to management, in other words, where each executive concentrates his attention on one phase of the business, it is essential that some means be devised to harmonize the activity of all executives by inviting each to shed the light of his specialized experience on the problems of the others. For example, the committee on manufacturing methods might well be made up of the plant superintendent, the head of the toolmaking division, the chief engineer, the personnel manager, and the head of the cost accounting department. The methods proposed by the plant super-

intendent need to be tested in the light of practical difficulties that might be encountered in toolmaking, machine design, and cost determination. The counsel of the personnel manager in terms of the effects on workers' health and attitudes, labor supply, and labor turnover would be of no less importance.

Other committees that one might reasonably expect to find in a business enterprise are (1) the committee on markets, (2) the shop conference or foremen's committee, (3) the committee on employee suggestions, (4) the worker welfare committee, and (5) the committee on public relations. Additional committees are to be found in almost every plant, but these are typical.

In many of the very large companies, such as the Bethlehem Steel Corporation and the General Motors Corporation, which have many plants scattered all over the country, a general co-ordinating committee is established with jurisdiction over the activities of all individual units.

The advantages of the committee system have already been noted.⁸ It will suffice at this point to present a very brief summary. The work of the committee is impersonal, its decision approximating in character the verdict of a jury. Give-and-take discussion in the committee room clarifies issues and prevents hasty decision based upon incomplete information or prejudice. Finally, by bringing people regularly into contact with one another, better understanding is encouraged and an *esprit de corps* is developed.

Other system devices that could normally be expected are the periodic formal reports to the president and the board of directors—financial summaries from the treasurer, production reports from the production manager, sales reports from the sales manager, and summaries of labor and industrial relations from the personnel manager.

Summary

Organization is static. Business, however, is dynamic, and in order to assure a properly co-ordinated and adequately oiled business machine the routine of handling day-to-day problems must be prearranged. Forms and records must be designed. Methods of work and process must be determined. The flow of work

⁸ See p. 517.

must be mapped out as carefully as the general plans a military campaign. This preplanned co-ordination is called *system*, the significance of which has best been summarized by Russell Robb in the following quotation: "It transmits intellectual power, physical power, and skill to the main purpose [of the organization]. It touches all parts of the undertaking, for it is the introduction everywhere of order and method. It relieves those who direct from the details of execution, and it relieves the man with special skill from the duties for which he is less well fitted. It brings work to men in condition for the application of their particular function. It moves all in accustomed routine so that the waste involved in initial effort is avoided. It insures that important steps will not be forgotten. It makes use of mechanical aids to save human labor and thought. It arranges the processes so that the greatest good is secured from the use of the property devoted to the undertaking, and it introduces method into the use, so that property is not idle—so that time, the opportunity for accomplishment, is not wasted."⁴

Books

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Article

- PRITCHARD, G. C., "Service, Production and Quality Records," *Factory Management and Maintenance*, Oct., 1936, p. 129.

P R O B L E M S

1. Define the relationship of *system* to *organization*. What defects would show themselves in organization if it were not for system?
2. What are the advantages of having an organization chart?

⁴ Russell Robb, *op. cit.*, p. 19.

Do you think it would be wise to post a chart where it may be seen by all employees?

3. "Written instructions are good enough for businessmen who have plenty of time, but in my business we are lucky if we have time to give all instructions by word of mouth." What advice would you give the person who made this statement?

4. "The greatest danger in a system of reports is overdevelopment." What is the character of this danger?

5. Outline the arguments you would suggest for the use of standard practice instructions.

6. What evidence of system can you find in your fraternity and in your college? Would you make recommendations for changes or additions?

7. After a visit to a local business firm, make a chart showing the system in operation. Be prepared to discuss its merits and defects.

8. Prepare a statement showing specific savings that result from an adequate system. What advantages accrue to the (a) office manager, (b) factory manager, (c) personnel manager, (d) salesmen, and (e) office workers?

CHAPTER XXXII

OFFICE MANAGEMENT

THE FUNCTION OF THE OFFICE

As pointed out in the preceding chapter, one of the major problems of the business executive is that of co-ordination. Business is more efficient if all homogeneous activities are grouped together in separate specialized departments. Finance functions are grouped together in one department; personnel functions in another; sales in another; and so on. The benefits of specialization are thus assured, but specialization gives rise to problems of co-ordination. The separate departments must work together constantly; their energies must be co-ordinated, and the departments themselves linked together.

The rapid growth in size and complexity of business enterprise has necessitated the development of a specialized business unit, the function of which is to link one department with another and to furnish an avenue of communication between the business and the outside world. This specialized unit is the business office.

The Role of the Business Office

The office of a business enterprise is frequently likened to the central nervous system of the human body. In support of this analogy one writer says that the functions of the office "revolve around the reception of ideas, the classification and storage of ideas, and the issue or dissemination of ideas."¹ And as stated by another: "The office receives messages, reports, and directions from the various units and transmits them to others. Its sensory endings come in contact with the world external to this business organism, and transmit its findings to the proper unit. Also it

¹ E. D. Jones, *The Administration of Industrial Enterprises* (Longmans, Green & Company, 1929), p. 520.

transmits to this external world various impulses from the internal units.”²

Departing from the analogy, we find that messages from the outside world in the form of orders, invoices, and general correspondence come first into the office and are relayed by it to the proper business units. By taking reports and directions from one department and sending them on to others, the office serves as a clearing house for the various departments within the business. The office further facilitates interdepartmental communication by maintaining telephone and messenger service. The functions of classification and storage are reflected in such permanent office records as the accounting and filing systems.

The efficient performance of office functions has become so important to most businesses that office management has been made the subject of intensive and specialized study for some years in both business and university circles. Nor is this fact surprising when one considers the magnitude of office operations and the vital part played by office functions in banks, insurance companies, government bureaus, and large corporations. The Metropolitan Life Insurance Company, for example, employs approximately 10,000 persons at its home office in New York City. Reliable estimates place the total number of persons engaged in some form of office work in the United States at something more than 3,000,000.³

OFFICE ORGANIZATION

The business office is strictly a service unit. The primary duty of the office manager, therefore, is to organize the office in such a way that it renders greatest service to the departments of finance, personnel, production, and marketing.

Departmental Organization

The office may be departmentalized or it may be centralized. Under the departmental organization each department attempts

² George M. Darlington, *Office Management* (The Ronald Press Company, 1935), p. 4.

³ “Functions of the Office Manager,” Policyholders’ Service Bureau, Metropolitan Life Insurance Company, Business Organization Series, Pamphlet No. 6, p. 1.

to become sufficient unto itself. The department head, usually a specialist in the field, recruits a staff of technical assistants, clerks, typists, stenographers, messengers, and the like, whose work is confined to the one department. Under this plan each department takes care of its own correspondence, maintains its own files, and purchases and stores its own supplies.

Centralized Organization

Throughout every section of this book the advantages of division of labor or specialization have been emphasized. The advantages of specialization in an office are no less than in an operating department. In recognition of this fact, centralized office organization has developed. Under this plan the office functions common to all departments are assigned to a central service department. For example, a single service department handles all incoming and outgoing mail, another maintains the centralized files, and another is responsible for the purchase of all office supplies. A single stenographic department performs all stenographic and typing duties for each of the producing departments, and similar arrangements are made for duplicating, messenger, and clerical service.

Advantages of Centralized Organization.—Although there are some executives that prefer the departmental type of office organization, the advantages to be gained from centralization become apparent upon reflection. In the first place, centralization allows almost complete utilization of the principle of specialization. Workers are assigned to those positions for which they are best fitted. Their efficiency, as a result, is greater than when they are assigned to miscellaneous jobs. Supervision costs are reduced by the employment of a specialized supervisor in each centralized department, and as a result there is a more complete application of work standards. The output of employees is improved in both quality and uniformity. Finally, the increased use of the principle of specialization makes possible better and more highly standardized training methods.

The centralized organization is more flexible than the departmentalized type. During the rush periods that inevitably come to all business departments, the energies of an entire force can be

concentrated on one job. Peak loads in each department can be carried more easily.

The problem of employee vacations, which so frequently handicaps departmental organizations, can be solved with relative ease. Finally, where employees engaged in the same work are employed under the same conditions, the comparison of production and the standardization of wages and salaries become less difficult.

The advantages of centralization will become more apparent with an examination of the functions and problems of a few departments usually found in large offices.

OFFICE DEPARTMENTS

Mailing Department

In most offices the handling of incoming and outgoing mail presents a problem of importance. Usually one person is placed in charge of a centralized mailing department and is held responsible for sorting and distributing incoming mail and for sealing, stamping, and disposing of outgoing mail. The department manager should be able to perfect routines and should be familiar with postal regulations and transportation schedules.

The first task of the day for the mailing department is the sorting and distributing of the day's incoming mail. Since in most instances at least a part of the work schedule for the day is determined by the early morning mail, it is necessary that mail be properly identified and placed upon desks by the time the rest of the office force reports for work. Delay may not only disturb general office routine but frequently results in lost orders, unsatisfied customers, and the like.

Although frequency of office trips depends upon volume of mail to be handled, length of time required for each trip, and train schedules, most offices follow the practice of sending messengers through the office at regular intervals. Special trips are made for the collection of telegrams and rush mail.

Outgoing mail usually reaches the mailing department in the form of unfolded letters, enclosures, and addressed envelopes. It is the mailing department's function to fold, insert, weigh, and

stamp all letters and packages. In offices where a large volume of mail is handled, these functions are usually performed by machine rather than by hand.

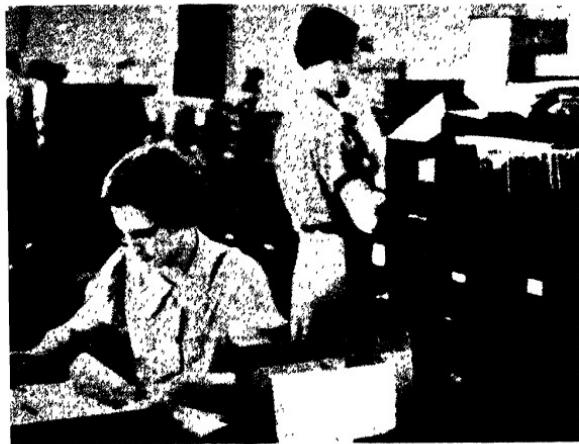
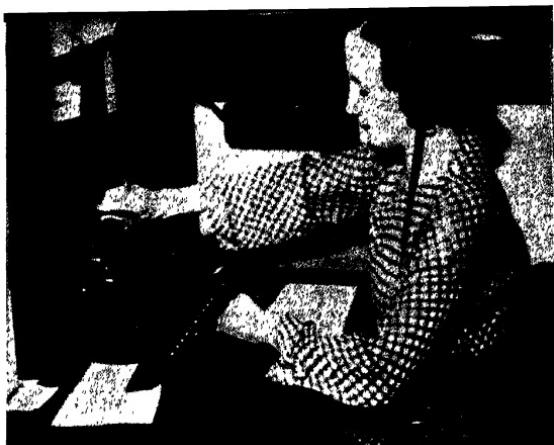
Since speed and efficiency are so very important in the handling of mails, it is advisable for the mailing department manager not only to devise his routine carefully but to put his instructions in writing. This will go far to counteract the natural human inclination toward "backsliding."

Filing Department

The primary function of the filing department is to preserve and protect business documents and to produce them promptly when asked for. This involves collecting, classifying, sorting, and filing. The characteristics most important in filing systems are speed and accuracy. The promptness with which papers are filed can scarcely be overemphasized. Unclassified and unsorted papers are not available for use. Without these characteristics much executive time is wasted in waiting, and filing routine is badly disturbed. The waste of time is especially important in view of the fact that the desired documents are usually of interest to more than one department. Inability to locate a letter or invoice at once may cause delay in two or three departments.

Filing Systems.—These characteristics, speed and accuracy, can most frequently be attained by the establishment of a centralized filing system under the direction of a specialist in filing methods. In those companies that maintain departmental files, there is usually not enough work to keep a staff of file clerks busy. The result is that clerks have a variety of duties to perform. In such a case, filing is frequently less prompt and less accurate. Moreover, when papers are filed in departments, they are less readily available to all the departments that may have occasion to use them. Centralized files are under the direction of especially trained persons who spend their entire time at filing. Precision, promptness, and uniformity result. Moreover, centralized files are as readily available to one department as to another.

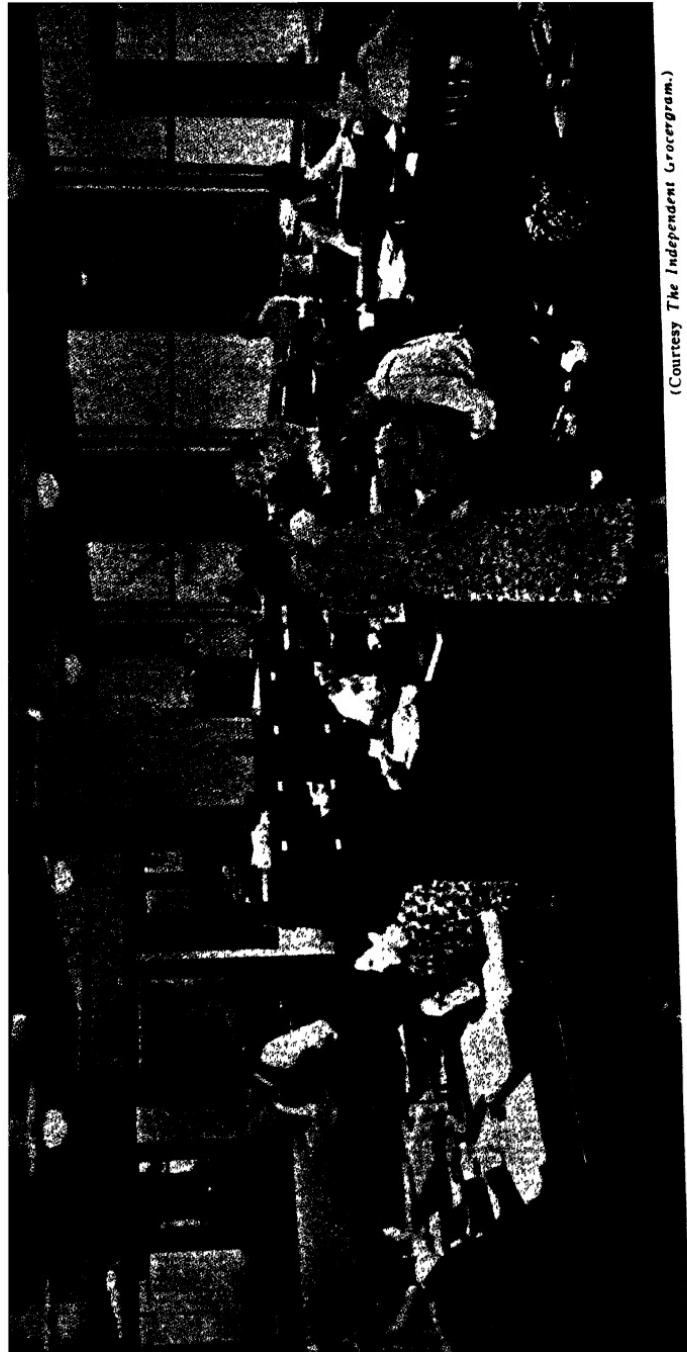
It is probably wise to give only file clerks access to the central files. In this way responsibility can be fixed and "out" papers can be traced. It is necessary to assign some material to the pri-



Office system requires a great variety of physical equipment. Here we see it in reference to communication, filing, and billing.

(Courtesy *The Independent Grocer*.)





(Courtesy *The Independent Grocer*gram.)

The general office. Notice the private offices at the back located close to the material available in the main office. Many functions are illustrated—at the left mail is being prepared; in the center are filing clerks and a ledger clerk; to the right are clerks doing accounting and stenographic work.

vate files of executives. This is true of private records that should not be open to inspection by the office as a whole.

Storage.—The accumulation of letters, documents, and other business papers presents a problem. If all old material is kept from year to year, the cost of storage space is unnecessarily increased. The questions then become: How long shall incoming materials be kept in the active files? What materials are to be transferred to storage files, and what is to be discarded?

The answers to these questions depend upon the availability of duplicate material, the rapidity with which material becomes out of date, and whether outside parties have an interest in the material. Thus price quotations, catalogues, routine correspondence, and the like, lose their value in a relatively short time. On the other hand, it may be necessary to keep contracts, guarantees, invoices, and purchase orders for a period of five or six years. Leases and other long-term contracts are usually assigned to cases for permanent storage.

Many companies follow the practice of maintaining a sixty- or a ninety-day file. Materials filed here are discarded at the end of a given period. In this connection, however, two things should be kept in mind. A record should be kept of all discarded or destroyed materials, and care should be taken to see that papers and records are not destroyed too soon. Frequently companies discard old material which, if available for reference, would furnish hints or a reliable guide toward shaping future business policy.

Stenography and Typing

The function of business stenographers and typists is to produce typewritten letters, orders, reports, invoices, and the like, as promptly and as accurately as circumstances will permit. As is true in other departments, promptness and accuracy usually can best be attained by a centralized stenographic and typing department. Where stenography and typing are done in separate departments, the department head usually has a few stenographers and typists who are hard pressed during rush periods and who are idle at least a part of the time during periods of normal business activity. This results in increased errors and much overtime pay at one time and excess idleness costs at another. The centralized depart-

ment, on the other hand, can arrange to match the rush period of one department with the dull period of another. The result is that, in the aggregate, a smaller number of employees under centralized direction can produce more than a larger number of departmentalized employees. To accomplish this, however, the head stenographer must schedule the day's work very carefully and keep an accurate check on output and assignments of stenographers and typists. Only in this way can she have girls available to respond to the hour-to-hour calls of various departments.

The advantages claimed for centralized stenography and typing may be listed as follows. It improves the quality and appearance of letters and reports. It results in greater uniformity and fewer errors. It enables management to standardize conditions of work and pay, and to compare the work of all employees. Finally, and most important, it results in prompt output and prevents work from being carried over from one day to another.

Greater uniformity and less cost result from the preparation and use of standardized paragraphs and form letters. Their use is restricted to routine inquiries but wherever feasible they result in much saved time for both dictators and typists.

OFFICE ARRANGEMENTS

No matter how well planned an organization may be, its efficiency will depend in no small measure upon physical conditions. Location and arrangement of the office, equipment, office personnel, and general environment exercise a great influence upon both cost and quality of work done.

Location and Arrangement

The principles governing problems of office location and arrangement are essentially the same as those discussed in the chapters on production.⁴ In either case the first task is that of surveying the work to be done. An organization chart should be prepared and a list of all persons to occupy the office should be drawn up, showing the departments and the kinds of work to be done. The space requirements for each type of work depend upon

⁴ See p. 335.

the character of work to be performed, upon the amount of work each employee can do in a day, and upon the probable rate of expansion. The general rule, however, is that from sixty to ninety square feet of floor space is necessary for each office employee.

Allocation of space and arrangement of furniture and personnel are made only after due consideration is given to (1) convenience of persons outside the company who have occasion to visit the office, and (2) flow of work in the office from one person to another. Arrangement of equipment and personnel should be such as to allow the work to flow along simple and direct routes.

Office Equipment

The problem of office equipment has a twofold importance. It must facilitate service, and its cost must be reduced to a minimum. In order to secure improved service from equipment, it must be uniform in color and material, it must be standardized as to size, and it must be easy to keep clean.

Uniformity in equipment material and color produces a harmony in the environment that results in improved attitude of workers. Cleanliness of equipment decreases the chance of soiled work that may have to be done over. Standardization of size greatly simplifies the problem of office layout and arrangement.

A most striking change in office management problems has come about in the last few years—a change that has transformed much office work from hand processes to machine processes. Many, advantages have come in the wake of this change: the machine results in great savings not only in labor but also in overhead; the machines are faster and more accurate, and can be operated by less expensive labor; more work can be performed and fewer errors will occur; and since fewer workers are needed, space is conserved and overhead cost reduced.⁵

Along with these advantages have come some disadvantages. With increased mechanization of the office, the investment in office equipment has increased greatly and the problem of management has been intensified. The selection, purchase, and maintenance of bookkeeping machines, calculators, duplicating and ad-

⁵ Darlington, *op. cit.*, p. 54.

dressing machines, filing and internal communication equipment, and so on, necessitate management of the highest type. This is particularly true in view of the fact that new and improved machines are constantly appearing on the market. Failure to install new equipment may result in unnecessarily high office costs. The decision to purchase and install, on the other hand, may necessitate great changes in office layout and routine. It may necessitate the retirement of six or a dozen employees. Relative cost and efficiency are discovered only after careful study.

Office Personnel

The selection and supervision of office personnel present few problems not already discussed in the chapters on personnel administration. The application blanks, interviews, tests, training programs, and follow-up methods may differ in form and content from those used for shopworkers, but the problems and principles governing their solution are the same. Job analysis, time-and-motion studies, compensation laws, promotion and transfer policies, and the like, are as important for office personnel as they are for shopworkers, and for the same reasons.

✓ One or two office personnel problems deserve special mention. The first arises out of the fact that a great many office workers are young women between the ages of seventeen and twenty-five. Many, though not all, have few economic obligations and may be inclined to transfer from one position to another. The problem of labor turnover, therefore, becomes of great importance. Moreover, since many girls of this age are in business only until they find a husband, they frequently have no solid and permanent interest in their work. The problem of hour-to-hour supervision is thereby intensified. ✓

The other office personnel problem arises out of the character of most office employment, which is specialized, routine, and mechanized. Workers are therefore subject to monotony and fatigue, both physiological and psychological. Some special means of combating this evil may be necessitated. Many companies have found that the introduction of regular rest periods is beneficial.

That much can be accomplished by regular rest periods is indicated in a study made in the offices of the Tennessee Valley Authority. Using file clerks as subjects for experimentation, a

study discovered that regular rest periods reduced errors in filing, classifying, and sorting by approximately 50 per cent. Speed was increased by 3 per cent in classifying and by more than 4 per cent in filing.⁸

Office Environment

The problem of providing an office environment conducive to attention and efficiency is most important. Adequate light and heat are necessary to prevent excessive nervous and physical fatigue. The ventilation system must furnish a comfortable and healthful working environment. Since much office work is of a routine character and does not of itself hold the attention of the worker, special provision must be made against distracting noise. Heavy building construction, tight windows and doors, and sound-absorbing flooring, walls, and ceilings are therefore frequently specified for office construction.

OFFICE CONTROL

The effectiveness of an office, like the effectiveness of a factory, depends upon the success with which men, materials, machines, and methods are co-ordinated. Control must be established; routines must be perfected; and system must be introduced. Several steps are necessary to assure adequate control of the office environment.

First, it is necessary to determine exactly what is to be done in the office. Second, studies must be made to determine the one best way of performing each task. This includes not only the determination of method at each stage in the process, but also the prescription of the regular paths to be followed by the work from the time it enters the office until its completion or exit. Finally, the standard practices should be incorporated in printed form in an office manual. Such a manual speeds the learning process and reduces training costs and goes far toward uniform improvement of work quality.

⁸ John F. Pierce, "Organizing for Control of Office Functions in the Tennessee Valley Authority," an address before the National Office Management Association, Swampscott, Mass., June 8, 1936.

Office Planning

The problem of planning office work—the problem of scheduling and dispatching work through the office—is similar to that found in the production department. Work time schedules should be determined and some means should be perfected to enforce them. The B. F. Goodrich Company office makes daily and weekly schedules for central orders, billing, time keeping, and statistics. The Gilbert and Parker Manufacturing Company makes weekly and monthly schedules, actual production progress being checked with a master chart controlled by the office manager. Successful scheduling, however, depends upon the accurate determination of the availability of personnel and equipment. Results are accomplished only after follow-up procedures are developed to assure the management that the work is being performed as planned.

Illustration of Office Routine.—What has been said about the establishment of control through the introduction of system or routines can be clarified by an illustration.

Let us take as an example a manufacturer of padlocks who has just received an order for 3,500 locks of a particular kind. We can assume, of course, that the organization has already been developed—that is to say, each person has been informed of the part he is to play in the manufacturing process. We will assume, too, that the plant system has been worked out satisfactorily: that all records, forms, and detailed instructions have been prepared to assure smooth and speedy performance of all functions, to indicate just how each function is to be performed, and to facilitate the co-ordination of the activities of all persons involved in the enterprise. The evidence of the system thus established, and presented graphically in Figure 50, would be reflected in the following manner.

The first evidence of system is to be found in the sales-order form that the salesman fills out on receipt of the order. The salesman makes the order in triplicate and sends it to the home office, where it is received by the mail clerk. After stamping the orders with the time of receipt he sends one copy to the sales manager, one to the order clerk, and the third to the department of accounts and collections. The copy going to the sales manager is recorded and becomes a part of the salesman's permanent record. After

making the day's sales summaries, the sales manager files his copy to await notice of shipment by the shipping department. When he receives this notice, unless there are special reasons for a follow-up, he sends the order to the central files.

On receipt of the second copy, the order clerk first sends a letter of acknowledgment (generally a prepared form) to the purchaser of the padlocks. His next move is to relay the order on to

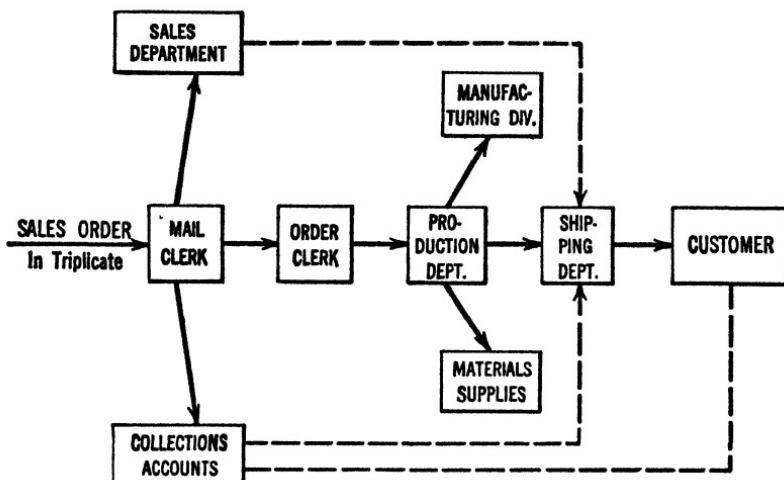


FIG. 50.—Office system chart.

the production department, where the forces of actual manufacture are put in motion and where additional forms come into use. The production manager, or some designated assistant, first checks the order for accuracy, specifications, requested time of delivery, and so on, and sends a work-order form out into the plant with instructions concerning time of operations and material to be used. At the same time the production manager sends another form to the material and supplies department, requisitioning the necessary material and tools and ordering them to be delivered, or at least to be available, at a certain place at a specified time.⁷ Still another form from the production manager's office informs the shipping department of the order and instructs it as

⁷ In the event that special tools or material are needed, the supply clerk must, in turn, prepare forms ordering these things from the proper sources.

to the date of shipment. The copy of the salesman's order received by the production manager is then sent on to the permanent files.

The third copy of the order is sent by the mail clerk to the department of accounts and collections, where proper records are made for permanent use of the company and where a statement of the amount due the company from the purchaser is prepared. This statement is mailed to the purchaser soon after the shipping department gives notice that shipment has been made—in ten, fifteen, or thirty days. The records are cleared only after the shipping department sends a notice to the sales manager and the production manager indicating that the order has been filled.

In order to insure against the natural inclination of workers, however conscientious, to backslide and forget, and in order, too, that new persons can be instructed in office system in the shortest possible time, most business firms prepare a chart similar to that in Figure 50. In most charts additional information concerning the forms to be used at each stage is included.

S U M M A R Y

With the rapid growth of departmentalization in industry it has become necessary to develop a separate service unit which can link the operating departments together. This linking or inter-relating function is performed by the business office, which furnishes a link not only between the various departments but also between the business and the outside world.

Although there are some types of office work that cannot be successfully centralized, there are great advantages to be gained from centralization of those services that are common to all departments. Examples are filing, typing, stenography, mailing, and routine clerical work. Centralization gives greater flexibility to an organization and reaps the benefits of specialization.

Office organization cannot function smoothly and efficiently without adequate personnel and good environmental conditions. Location and arrangement of the office, selection of equipment, and development of personnel are therefore problems of prime importance. Similarly, efficient office organization necessitates control and to this end routines must be established and all work must be planned ahead.

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P R O B L E M S

1. Prepare a chart showing the primary function of the business office.
2. "The office is to the business what the central nervous system is to the human body." Illustrate the truth of this statement.
3. Distinguish between the departmental type of office organization and the centralized type.
4. Give two examples of businesses that might use the departmental type of office organization with advantage.
5. Draw up a statement of the business costs that would be influenced by the adoption of the centralized type of office organization. How would each of these costs be changed?
6. Prepare a set of recommendations for the establishment of centralized mailing, filing, and typing departments. Give specific reasons in support of your recommendations for each department.
7. In what respect do problems of office location and equipment differ from problems of factory location and equipment?
8. "Office personnel problems could be partially solved by the elimination of young women from office employment." Comment.
9. Prepare a list of office duties that lend themselves to scheduling and dispatching.

PART VII

LAW

CHAPTER XXXIII

THE LAW: ITS NATURE AND ENFORCEMENT MACHINERY

In Chapter I the many elements bearing upon a business in various external relationships were illustrated. One of those was the law. Just what influential factors are in this element can best be made clear by a brief examination of the nature and procedure of the law.

General Definition

Law may be said to consist of a group of rules or principles made enforceable by government and used for the settlement of disputes. Principles of law cover a wide range of situations, but what we call the legal system accumulates these many and varied principles, classifies them into groups of like kind, and administers them in controversies arising between persons and between persons and government.

The general functions of the law are (1) to set up devices and rules for business conduct, (2) to give security of economic interests, and (3) to give security of person. To achieve these objectives the law must embrace two general points of view: that of society and that of a person in society. These two views are in constant conflict as the courts seek to determine the proper rules to promote security and economic well-being.

Legal Systems

The legal systems of the world are roughly divisible into two categories, the civil law and the common law. The former is the older, while the latter is a product of the English people. The common law developed many centuries after the earlier system had been established. The civil law is often called the Roman law because the Roman emperors were so prominent in organizing the principles and establishing the courts to administer the system.

The influence of this system spread throughout the portion of the world dominated by the Roman Empire. Much of the Roman law, however, is based upon the earlier systems of the ancient world found in Syria, Babylonia, and Egypt.

Sources of Law.—The important difference between these two legal systems rests for the most part in two matters: the source of the legal principles and the functioning of the court machinery. The civil law system derives the principles from the edicts of government. Originally this meant the emperor. In the modern state it means the legislature; or, more recently, the dictator. These principles are written and carefully classified by subjects into what are known as "codes." If the dispute becomes of much importance through its legislative channels the government will probably prepare a principle for the settlement of such disputes. Where the government does not state a code principle and the existing code cannot be interpreted to include the case, the controversy remains unsettled. In other words, the court may interpret the code but cannot declare a new principle of law.

By contrast, the common law derives its basic statement of principles from the declarations of judgment by the early court system of England. These declarations have been perpetuated by a series of succeeding cases each built upon the judgment of its predecessor. This law was given the title "common," and is meant to denote what was generally understood to be equitable in settling the immediate disputes. In the form of their constitutions and statutes legislated in conformity with such constitutions, the action of all the people may change these fundamental principles. When such statutes or constitutions exist, their statement of principle takes the place of statements by the courts, but upon any subject not covered by such an enactment, the courts are in a position to declare what is common justice or the common law. This means that the common-law system may grow to meet new conditions without legislation, that it may conform to changing society without alteration by legislative government. Most changes of economic or social structure can be recognized in the civil-law system only after legislation is enacted by the government.

Procedure of Law.—The second point of difference between the two legal systems rests in the procedure of enforcement

within the court room. First among these differences is the use of the jury. The jury was an invention of the English common-law system and was devised so that issues could be tried by the equals of the contestants. The decision of these persons on the jury was to be accepted as final in the determination of the facts in the controversy. The jury occupies this position today. Its position is fortified by the usual constitutional guaranty of the right to trial by jury for all criminal cases and under stated conditions for all civil controversy. This guaranty is contained in all State constitutions and in the Federal Constitution.

The theory of the jury was to test the controversy by people who were neither above nor below the contestants in their general station of life and who knew something of the merits of the controversy. In modern times, the latter element has been changed so that the requirement is lack of knowledge of the details of the particular dispute. But in essence, the courts still seek to prevent bias by barring persons who are prejudiced and by impaneling jurors whose judgment cannot be easily bought or influenced.

The civil-law system adapted itself to the use of the jury. The right of the judge to comment to the jury and to overrule it is much greater than in the common-law system. Under our common-law practice, the finding of a jury on a question of fact is normally absolute and final. The judge has only to utilize the jury's finding by applying the correct legal principles to the findings in order to give the judgment.

The second point of difference as to procedure is the power of the judge in the civil-law court to supervise the conduct of the trial by questioning witnesses, questioning the attorneys, and commenting upon the evidence and reliability of witnesses. Under the common-law system the judge generally has been made an umpire while the facts are being presented to the jury. He has only to see that the evidence is presented according to the general rules of procedure. For the judge to deliver opinions on the weight and reliability of the evidence has generally been regarded as improper. His right to comment upon the evidence in most cases is limited to showing the jury how to use the evidence in applying the legal principles. The judge has a functional division of the work of the court—to apply the legal principles. The jury is supreme in its field—to determine the facts. These two points

make a distinct contrast in the work of the two court systems and, together with the difference in origin of the law, mark the more important differences in the systems.

THE COURT SYSTEM

Division of the Courts

Legal administration is the application of law principles to the particular controversy and calls for a procedural method to be established which we know as the *court system*. This is an arm of the government maintained for the use of society and operated by governmental officers, elected or appointed.

These court systems can be divided into two parts: first, the courts of original jurisdiction, and second, the courts of appellate jurisdiction. The titles indicate, in general, their function. In the former the original hearing is held and to the latter are taken any appeals from this earlier hearing.¹

Original Courts.—In the court of original jurisdiction the hearing is distinguished by the holding of a trial, at which time the evidence and witnesses will be produced and the issue tried. If a jury is to be used it will be present and the judge will pass upon the correctness of the trial procedure. All the proceedings are taken down in stenographic reports for the "record." After all evidence is presented, the attorneys make their arguments. The jury then gives its verdict and upon the basis of the verdict the judge declares the judgment.

Appellate Courts.—If the case is to go beyond this point it must go to the appellate court on an issue of law. That is to say, in this appellate court, there are no witnesses or evidence or jury. There is a re-examination of the record to see if legal principles were correctly applied at all material points. If this is true, the court affirms the judgment. Only when the court finds an error on the part of the judge in the application of the legal principles or an insufficiency of evidence will it order a reversal or modification. At this juncture the appellate court may order the controversy to be retried or dismissed. The appellate court is regarded

¹ The appellate courts sometimes have original jurisdiction in a few well-defined actions like quo warranto.

as the final court. Upon rehearings the court may reverse its own opinions, though this happens infrequently. Once the court's order is known, the usual way to effect a change is by legislative statute. Subject to provisions of Federal law, certain cases may be transferred from State courts into the Federal courts.² The United States Supreme Court is the court of highest appellate jurisdiction on Federal questions coming either from the State or Federal courts.

Law and Equity Courts.—The common-law court system is divided on still another basis: courts of law and courts of equity. The difference between these divisions is largely a matter of procedure and remedy. The law division is the place for most controversies. The end of a law case is for possession of property or is an award of money damages. Such awards may not always be an equitable remedy. It is a prerequisite, therefore, to an equity case that there is no adequate remedy at law.

The historical creation of equity explains its position. In the earlier days, the legal judgments were entered upon the basis of writs or decided cases. When, therefore, a person had a controversy new to the courts and which a writ did not cover, he had no right to be heard. Persons in such a position appealed to the king's court. His chancellor began to hear such controversies and, on behalf of the king, issued orders for their settlement. The orders which this officer made were frequently given for remedies that the law had never considered. A great many of the edicts issued by the king's officer were orders to perform or to refrain from performing some specific action, or to give an extra period of time beyond the contract term for redemption of debt. Thus we have equity acting to give a more adequate remedy. This is the historical background of equity. Today it functions for the same general purpose. It is more informal than the regular law procedure, and permits the judge wide discretion in hearing and settling controversies, all of which may be accomplished without a jury. Thus the procedure is simplified and the remedies made more extensive. Equity represents the effort of the legal system to give justice where its formalities have created severe restrictions.

² The Federal government maintains a court system covering the United States, in addition to the systems maintained by each State.

A TYPICAL TRIAL

Petition

The first step in a legal procedure is the filing of a petition. Whoever has a complaint to make against another must prepare this petition, which contains his statement of the situation and his request for relief. It is filed with a recording clerk and the legal officer, a sheriff or a process server, is given a notice to be delivered to the defendant.

Jurisdiction

The first difficulty that the plaintiff encounters in getting the law suit beyond this point is to obtain the jurisdiction of the defendant. If the suit is a personal one, the defendant must be found within the territory of the court's line of jurisdiction. If the suit is about things which are located within the court's jurisdiction, laws usually provide that notice is given the defendant if it appears in some regularly published newspaper of the jurisdiction. Depending upon the nature of the case, jurisdiction must be established by one of these jurisdictional processes. The defendant is then expected to respond. He may respond in one of two ways: by raising questions of legal principle as to the propriety of the remedy asked or the propriety of the jurisdiction, or by contesting the alleged facts in the petition. The choice is for the defendant or his attorney to make. If the former plea is chosen, these legal matters will be tried before the judge and determined before the case can go further. If the plaintiff is at fault upon some legal principle it is obvious that his case cannot be continued.

Defendant's Pleas

These questions of principle being answered, the defendant must prepare his statement as to the situation of fact complained about. These two papers—petition and answer—obviously bring the stories into conflict at their various points. These are the matters which must be tried. The case, after the necessary machinery has been followed for bringing it through the docket, will come before the court at a time and place set for trial.

The Trial Court

At the trial a jury will be drawn unless both the parties have waived it or the trial is in equity. Opening statements of the respective sides are made to the jury. After this step, the plaintiff presents his testimony and witnesses in order to impress the jury with his story of the situation. The defendant does likewise. As this testimony is given, the attorneys for each of the parties may question the other witnesses in an effort to modify or change their report.

When the testimony is concluded, and the arguments by attorneys are finished, it is for the jury to vote what it believes to be the facts as proved in the trial and to render its verdict. Next, it is for the judge acting upon the verdict to render whatever judgment correct legal principles entitle the winner to have in the case. This general procedure constitutes a trial procedure.

Appeal

From this trial there is the next and last step of appeal,⁸ the general nature of which has already been outlined. In brief, the appeal is for the purpose of testing the application of legal principles to the case. The case, as such, has been heard in the original court proceeding. The hearing on appeal will test the case or the record made in the trial court. It is for this reason that the trial procedure is of great importance.

S U M M A R Y

The court system of the American people is inherited from England and is known as the common-law system. It is distinguishable from the important civil-law system especially by the use and functioning of the jury and the power of the courts to declare the common law as well as to interpret the legislative statutes. The courts are divided into law and equity divisions, and into original and appellate jurisdiction.

⁸ In some States where the volume of work is large, several appellate courts are provided so that the appeal of a case may need to be taken through several lower appellate courts before reaching the highest court. The procedure in these intermediate courts and the function which they perform in the legal system are the same as those already described.

The trial procedure provides for the determination of the facts by the jury and the interpretation of the legal principles by the judge. The issues between the parties are made by the various pleadings of the litigants. The record of the case is made in the trial court where the witnesses and evidence are presented. Appeals for interpretation of legal principles are carried into the appellate courts on the basis of the record. This constitutes the background and administrative machinery of our legal system.

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P R O B L E M S

1. Just what functions does a legal system assume for the business world?

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2. How do you distinguish between the Roman and the common law? Are there important differences?
3. Why are the courts divided in their functions? Explain what is meant by the terms *petition*, *answer*, *jurisdiction*, *appeal*, and *law court*.
4. Develop the historical reasons for the equity court. Give a current example of its operation.
5. What is meant by a *trial*? Is it the only operation in the legal process?
6. Explain how the functions of the jury and the judge are divided

CHAPTER XXXIV

CONTRACTS: THE BUSINESS HUB

When analyzed, commercial transactions will be found to rest on agreements between parties. Since most of these agreements qualify as contracts we may fairly say that the legal hub around which commercial activities revolve consists of these contractual agreements between persons. Though many different kinds of legal rights and questions are involved in these agreements the most important and central characteristic is the fact that they come into being as contracts. It follows, therefore, that the nature of a contract should be examined if only in a general way. These questions will be raised in order to show the relationship of law to business transactions. It is not intended to supply complete answers in the cases, but rather to suggest some of the problems a businessman must face in relation to legal rules.

General Elements of a Contract

A contract must have the following elements: offer, acceptance, consideration, parties with capacity to contract, and legal subject matter. That is to say, any agreement which is to qualify as a contract must contain all five of these elements. The absence of any one of them will keep the agreement from being a contract and will render it unenforceable in the court system.

Offer.—Briefly, to have an offer we must find that there has been a statement upon a definite subject, clearly expressed to show a willingness to be bound to the statement, and addressed to a particular person. Anything less than this is an invitation or suggestion, but not an offer. Suppose, for example, a merchant receives a letter which reads in part as follows: "We are now in a position to fill orders on the goods listed, in accordance with the enclosed sheet showing kinds of goods and list prices for each group. We hope to have an early order from you so that you can be assured of an early shipment." Many people would feel that a

letter of this type conveyed an offer to them. If they had sent an order in accordance with the terms listed they might claim a right to receive the goods. As a matter of fact, the courts usually regard the statements embodied in this letter as only an invitation to negotiate and not as an offer. To have been an offer this letter should have read: "We will fill your order, not to exceed 100 items of each group on the attached list, at prices shown if the order is received within the next five days." This letter is definite as to the writer's intention to perform, as to the offeree, and as to the subject matter.

Acceptance.—If there is to be an acceptance of an offer, we must find that the person addressed in the offer has made the response expressing a definite willingness to perform the exact terms of the offer. Conditions or expressions of general intent to become interested are not sufficient; there must be an actual commitment to the terms of the offer as it stands. It is a common practice, for example, for wholesaling firms or manufacturers, when they receive an order, to return a postcard to the sender of the order. Such a postcard commonly reads: "We are pleased to have your order of October 20 and expect to be able to ship the goods on or about November 5. Thanking you for your kind order, we remain . . ." Anyone receiving this card is likely to regard it as an assurance that the order will be filled. That is, he feels that a contract has been concluded which entitles him to the goods as an obligation of the wholesaler. As a matter of fact, these cases are regarded as insufficient to constitute an acceptance. Therefore the merchant who sent the order has no contract for the goods involved in his order. To be an acceptance this card should have read: "We acknowledge your order of October 20 and agree to fill it by shipment on or before November 5." You will note this card expressly states that the firm will ship the goods—it is a definite commitment.

Consideration.—As an evidence of the seriousness of the parties, each contract must have what is known as *consideration*. Consideration means the exchange of an obligation legally enforceable in return for a like obligation of the other person. Unless we find that both parties have agreed to give consideration and have made it exchangeable one act for another act, the con-

tract lacks one of the vital elements necessary to make it enforceable. This element is one of the most difficult to understand clearly. But at this point we can only suggest the necessity for its existence as an element of a contract.

Capacity of the Parties.—Any agreement to be enforceable in court must be made by parties with the capacity to bind themselves. The general requirements are that the persons be of legal age and of sound mind. But there are some exceptions. The right of certain groups of persons to make a contract is specially limited. These groups are minors, married women, insane persons, drunkards, and aliens. Another group that must be named is corporations, which are artificial persons possessed of the capacity granted when the corporate person is created. The point to be borne in mind generally is that when one wishes to enter into a contract with someone in one of these groups he must recall that special rules are in effect regarding the capacity of that person to make the agreement. The special rules must be carefully studied so that the validity of the contract will not be impaired.

Legal Subject.—A contract must be upon a legal subject—it must involve legal ends and legal means—if individuals are to appeal to the court system for aid. It is obvious that the agreement must have for the subject matter something which is not generally unfavorable to society. A series of situations, therefore, are regularly looked upon as against public policy and illegal: (1) restraints of trade, (2) monopolistic agreements, (3) wager agreements, (4) usurious agreements, (5) limits upon liability in certain cases, and (6) statutory illegalities. These comprise a series of situations in which the contract can be enforced only under the rules pertaining to these exceptions, and hence they merit attention if the validity of a contract is to be assured.

Form Required

In general, a contract does not have to be in writing to be valid, but some contracts, as for example deeds and negotiable paper, must be in writing in order to exist.¹ These contracts are ones which in their very nature must be in writing. But other

¹ Others are bonds, assignment of patents, acceptances, etc.

types of agreements may be made by personal agreement, in oral conversation, or by a mixture of written notations and oral expressions, and are as valid as if they were written.

There are certain groups of contracts, however, in which the defendant is permitted to challenge such agreements and call for some written proof or evidence that the agreement is real before enforcement is granted. These cases require a special proof for enforcement and are specified by the sections of what is known as the Statute of Frauds.² Cases which are not enumerated in the Statute of Frauds or in other special statutes do not depend upon any particular form, written or otherwise, for enforcement. It is to be noticed that even the Statute of Frauds does not require the contract as a whole to be in writing, but as a rule of evidence requires only that certain proof be produced showing there was an actual agreement made.

Transfer of a Contract

Since a contract is a personal agreement it was always regarded in the earlier law as incapable of being transferred to another person for performance or for enjoyment. That is to say, unlike a piece of physical property the contract could not be sold to another person, a stranger to the original agreement. In a state of high commercial development this has been found impractical. Let us take a case in which someone has contracted to build a property for a total of \$10,000, which is payable in monthly payments of \$2,000 during the course of construction. In this case the contractor is entitled clearly to a total of \$10,000 when the building is completed. The contract is a valuable right. If the contractor, however, can sell at once the privilege of receiving the \$10,000 in the future it is a much more valuable right to him. It would be a great convenience in such a case for the contractor to raise the funds for the building materials by a sale of these contract rights. The law formerly permitted no such sale. But the

² Contracts Required to Be Evidenced in Writing upon Challenge

- a. Contracts of guaranty and suretyship
- b. Contracts of executors and administrators
- c. Contracts made in consideration of marriage
- d. Contracts for the sale of lands
- e. Contracts not to be performed within a year after making
- f. Contracts for sales of goods.

numerous occasions in which it was desirable that these values be made salable caused the law to recognize that a rule fitting commercial practice should be adopted. Consequently, the theory of the law was developed so that contracts *could be assigned* as to *the rights* which a person would receive under the agreement.

There is a general principle, however, that assigned rights must be for impersonal things; not for personal service or skill. A person might, for example, retain a lawyer for annual service. This agreement to serve as legal counsel for a particular individual, of course, involves many personal elements of character and capacity to do the work. In such a case we do not concede the one who has employed the counsel the right to turn his contract over to another person and force the lawyer to serve the latter. Where the contract involves strictly personal relations the desirability of permitting the transfer of the contract is clearly different from the cases involving only money payments or delivery of goods. An assignment of personal services is impossible.

Though a party who possesses rights to money or delivery of goods may transfer these rights to a stranger, the liabilities which the original party assumed cannot be transferred. The fact that the rights have been sold in no way relieves the original party from performing in every respect the promises which he made in the contract. A change in these responsibilities could be made only if both parties agree to cancel the contract.

In the case of an assignment the purchaser receives exactly the rights which the original party possessed. This involves, however, some very definite risks. Suppose, for example, Mr. Jones has a contract to deliver a quantity of goods to Mr. Roe for the sum of \$500. If Mr. Smith purchases the right from Mr. Jones to receive the payment of the \$500 when it is due, he assumed a risk that Mr. Jones will deliver the proper goods at the correct time. Suppose that Mr. Jones fails on one or more of these matters. Until the performance was complete Mr. Roe would desire to avoid payment. As a matter of fact, Mr. Smith is subject to this very defence by Mr. Roe. Mr. Smith must wait until the contract has been performed so that Mr. Jones would have been entitled to his payment. Mr. Smith can collect nothing to which Mr. Jones himself would not have been entitled.

The point just made about the position of the purchaser of

the assigned rights must be distinguished clearly from the rights of a bona fide purchaser of negotiable paper. In the previous case if Mr. Roe had given a promissory note which had become due after it had been sold to Mr. Smith, the performance of Mr. Jones would have been immaterial to the right of Mr. Smith to collect on the note. The bona fide purchaser of a note, in such a case, is relieved from the terms of the contract between Roe and Jones in respect to the goods. The contract in the form of a negotiable note gives Mr. Smith a better right than he could have received by an assignment of the contract rights. This is a vital distinction. It explains in part why negotiable paper is required of debtors when the creditors anticipate the future need for selling such claims.

Performance and Discharge

In general parties to a contract will be expected to perform exactly as they have agreed. Unusual difficulties do not ordinarily serve as excuses. The time of performance is regarded as so important that any failure to conform to the promise is considered a default of the contract. It is true, of course, that in all of these instances the contract can provide exceptions and allowances for situations which may arise unexpectedly. It would be wise if such exceptions were named in the contract since otherwise the general rule will hold the person liable. A contract ordinarily can be discharged only by its performance. An excuse for nonperformance may be found in some conditions, but these do not arise out of mere inconvenience or unprofitableness.

Performance in full would be the usual way in which a person would complete his contract. The agreement of one to perform may be excused or substituted for by the consent of the other contracting party. A failure of the one party, X, to keep his promises will, of course, discharge the other person, B, from keeping his promises. Thus we may say that, in general, discharge is by performance, by waiver, by substitution, or by failure of the other party. The law supplies technical situations of discharge in (1) bankruptcy, (2) statute of limitations in filing action, and (3) absolute impossibility.

Summary

In outlining these considerations regarding a contract the intention has been to emphasize the many legal implications of business activity about which one ought to inquire. A realization of how many errors one may commit in preparing a business agreement will help one to guard against them. Any failure to meet the legal requirements may, of course, be very expensive to a businessman should the contract be invalid. Since most business arrangements are embodied in contractual agreements every businessman has the risk of making enforceable contracts. The businessman can help by using good methods and by seeking legal counsel.

Every contractual agreement must possess the five essential elements of a contract; a defect in any one may invalidate the agreement. Offer and acceptance is typically the substance of commercial transactions as well as of bids, inquiries, and negotiations. Businessmen must have a sense of discrimination in these matters if they would avoid disagreeable legal controversies and their attendant losses.

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P R O B L E M S

1. How can contracts be said to be the business hub in legal relations?
2. State the elements of a contract. How many must be satisfied in any case?
3. Does a contract arise from the particular form used? Explain. What agreements require written evidence?
4. Why did commercial policy require the transferability of contracts? What are exceptions?
5. When may people be excused from their contracts on account of hardship, misfortune or unprofitableness?
6. Why do many of the business controversies rest in the questions of offer and acceptance?

CHAPTER XXXV

CONTRACTS: SPECIAL KINDS

S A L E S

Nature of Sales

Contracts can be classified into specific divisions pertaining to the type of commercial transactions involved. For example, there is the division of law known as "sales." This division sets off a series of legal principles applicable only to contracts involving the exchange of goods. In the eyes of the law, this phase of contracts, sales, concerns only complete transfers of ownership, and transfers of goods. It is obvious, therefore, that the rules of this division of law will have nothing to do with transactions regarding transfers of real estate, labor employment contracts, or insurance contracts. In other words, the particular principles in this division are applicable only if we are dealing with *transfers of title in goods*.

Risks of Ownership

The importance of knowing the legal rules about the passing of title is great because these rules determine who shall bear the risks of ownership. Let us take the case of the retailer who has visited a wholesale firm and has selected articles in stock for his order. The wholesaler has the items taken out of stock and marked with the buyer's name before closing time. That night a fire destroys the wholesale house. Naturally the question will arise as to whose goods were destroyed, the retailer's or the wholesaler's. In such a controversy we must turn to the law of sales. Where the parties have not agreed otherwise the law would say the retailer had received the title of these goods.

Warranties

As an example of another phase of this whole problem, let us suppose an electric kitchen mixer is delivered by a retailer to

a customer. Because of a mechanical defect the machine fails to work. To the customer's complaint the retailer replies that it is not a regular brand and that since no warranty was given by the manufacturer, he is not responsible for the defect. This raises the question of the liability a dealer has for the quality of his goods in cases in which he has said nothing about assuming liability.

43—BILL OF SALE OF PERSONAL PROPERTY

The Hoffman General Supply House, Lincoln, Neb.

KNOW ALL MEN BY THESE PRESENTS:

That in consideration of **DOLLARS,**
the receipt of which is hereby acknowledged do GRANT, SELL, TRANSFER, and
DELIVER unto
heirs, executors, administrators and assigns, the following goods and chattels, viz'

TO HAVE AND TO HOLD, All and singular, the said goods and chattels, forever; and the said grantor hereby
covenant . . . with the said grantee . . . , that . . . he . . . the lawful owner . . . of said goods and chattels, that they are
free from all encumbrances, that . . . he . . . has good right to sell the same as aforesaid and that . . . he will warrant
and defend the same against the lawful claims and demands of all persons whosoever

IN WITNESS WHEREOF, The said grantor . . . has hereunto set . . . hand, this . . . day
of A D 193 . . .

Executed in Presence of

FIG. 51.—Bill of sale used to evidence sale and title transfer.

The law of sales supplies the answer. Application of the principles governing warranties, which the law interprets as being implied in certain transactions; makes the dealer in this case responsible. The legal rule states that a dealer impliedly warrants his goods against material defects.

It is becoming more and more common for a customer to desire furniture which he can use while it is being paid for. The credit rating of many people is not sufficient to allow a direct sale. In these instances the customer is allowed to have the furniture to use but the ownership is kept in the store while the installments are paid. When all the payments are made, the agree-

ment is canceled and the title turned over to the buyer. This is an arrangement known as a *conditional sale*, a well-recognized legal device. How to execute the papers, how to make the agreement effective as to strangers, and how to protect the rights of the one party if the agreement is broken by the other are some of the problems it presents.

Documents of Title

A practice has developed in central markets to facilitate the trading of goods without physical handling. Documents are used to represent the goods between buyers and sellers. These papers are known as *documents of title*. Examples of documents of title in common use are bills of lading, warehouse receipts, and bills of sale.¹ The parties in such transactions are governed in their rights by rules in the law of sales and by the rules concerning such special documents as are in the Warehouse Receipts Act.

B A I L M E N T S

A very common practice in business is to leave property in the hands of a person for storage or pending resale to others. This relationship gives rise to the special contract known as *bailments*. This particular relationship needs always to be distinguished from relationships involved in contracts of sale. In a bailment one party surrenders goods into the possession of another who is to keep and return the same goods to the owner. No transfers of ownership are involved, merely the holding of the goods in possession. Ordinarily the risk of ownership is not shifted for the title has not changed. This helps to distinguish the agreement from a sale.

Many bailments are in a form known as gratuitous (free) bailments, while the ordinary commercial bailment would be known as a bailment for hire (payment). The responsibilities of these two types of bailments obviously differ for the holder of the goods. Where the bailment is for hire, clearly, we may expect a greater degree of care, may expect extra service such as insurance against the risks of destruction or the theft of the property.

¹ Figs. 51 and 52.

Hotelkeeping, safekeeping, such as deposit companies or vault companies, warehousing and storage firms are some commonly recognized bailments. Each of these relations gives rise to particular liabilities as determined by the variation in subject matter. The law of bailments gives the answer to these relationships. Let us take as an example a businessman who has acquired a number of bonds which he is holding among the assets of his firm and which he wishes to have quickly available for use in the bank as collateral. He makes it a practice, therefore, to ask the bank officials to keep these bonds for him. During the course of a bank robbery at this particular bank, these bonds are stolen and never recovered. Upon whom will such a loss fall? Is the bank responsible for a replacement of these instruments to the businessman? This is an important question in the field of the liability of a bailor.

The most common bailment in commercial transactions is probably that of warehousing, and in this connection a number of documents of title are handled. The typical one, of course, is the warehouse receipt, an instrument which not only represents the contract of agreement for the particular goods in storage, but also is prepared in a fashion which makes it possible to transfer it from one owner to another by simple endorsements on the back.² Thus without ever leaving the warehouse goods may have a whole series of owners. The responsibilities and rights as between all of these parties is to be determined under the law of bailments and sales.

I N S U R A N C E

Risk is a characteristic found throughout all business. As various forms of risk were pointed out it has been suggested that insurance could be purchased for some. Insurance contracts cover a variety of risks that are commonly classified into the general fields of life, property, liability, suretyship, compensation, accident, and maritime. As their title suggests, each of these types deals with separate divisions of risk. A more complete knowledge

² See Fig. 52.

of any one of them must be gathered if one is to judge whether the risks encountered in business are covered by policies offered.

Elements of the Contract

The insurance contract can be created, however, only under certain conditions. First of all, the applicant must have an insurable risk. That is to say, the insured must prove that he has a vested interest in the risk for which the insurance is requested at the time the contract is purchased. The form of interest in the property may be one of several kinds and the insurance can be taken on behalf of a party only to the extent that he has an interest. For example, if one were leasing a property it is obvious that he will not ordinarily endeavor to insure the property itself because his interest is only in a use of the property. Since the title of the property is in the owner, the property can be insured only by that owner. The tenant may, however, take insurance upon his right of occupancy for the duration of the lease and thereby cover the risk of having no place of business should some unexpected event destroy the property.

For the most part, the law does not regard contracts based on anything except mathematical average, as insurance. A contract without this basis would be regarded as a wager. Many risks in business are as yet uninsurable because so little is known regarding the factual data that a mathematical statement of the risk is impossible; the variations in prices are but one example. This price risk must be continuously borne by the merchant. No insurance has been perfected which can assume such a risk.

NEGOTIABLE PAPER

Essentials

In a great number of commercial transactions such common credit instruments as checks, notes, or drafts are utilized. These instruments are special types of contracts falling under the general head of negotiable paper. This type of contract differs from other contracts for (1) it is always in writing, (2) the obligation is for money alone, and (3) the contract follows a specially

worded form. These requisites are the distinguishing features of the instrument and set it apart from ordinary contracts.

In most instances negotiable paper is made as a secondary agreement to a commercial transaction calling for a payment.

The promise or order of payment is reduced into the form of a negotiable instrument and given to the person to be paid. Those who create this paper intend that it may pass into the hands of those who are strangers to the original transaction. In the hands of the holder the instrument is to give credit as if it were money. The negotiable instrument, therefore, ordinarily makes no mention of why it was given or of the performance the party is expected to give before the money should be paid. The merit of the instrument is in its freedom from these questions.

Rights and Liabilities

Subsequent owners of these instruments, therefore, if they are holders in due course, are free from the questions of the proper performance, the nature of the goods, if any, and the warranties for which the parties themselves are otherwise obligated. The question will naturally arise as to who are holders in due course. Is it anyone who possesses the instrument? This, of course, is not true, and the rules for distinguishing one who is qualified as a holder in due course can be found only in the study of the principles of negotiable paper. The principles state that the holder (1) must take for value (2) before maturity (3) a complete instrument (4) in good faith.

Negotiable instruments are designed to take the place of money in commercial transactions and to be transferred between a number of persons. To indicate the passage of ownership from one party to another, the device of endorsements—the writing of the owner's name on the back of the instrument—is commonly used. A party making a transfer in this manner is known as an *endorser*. The question arises as to what effect this action has in relation to owners who follow the first endorser and claim rights against him. In turn, what obligations are due from endorsers generally? Let us suppose you endorsed a check and above your own name one of the endorsements is forged and the present holder of the instrument cannot get it paid. Do you owe him

anything? Or, to take another case, if the holder of the instrument cannot collect from the maker, do you have to make the payment to the last holder? Both of these are simple questions involved in the act of endorsing negotiable paper. In general the law implies your liability to pay the final holder in these cases. Knowledge of these liabilities is essential to anyone in business.

If all endorsers are to be made liable when a negotiable instrument is due, there is a series of acts necessary. The first step is presentment. This seems simple, but such questions arise as to where presentment shall be made, on what day is it required, and whether one needs to have the instrument with him. The second step is protest if payment is not promptly made. Protest follows a regular formal procedure and is required unless it is excused by agreement. The final act is to send a notice within a twenty-four-hour period to all persons held liable by the holder. Because a failure in any part of this procedure may give a complete defense to persons other than the maker, its careful observance is important when the holder wants the previous owners or endorsers to pay him.

G U A R A N T Y A N D S U R E T Y S H I P

A great many contracts require that more than one person give his promise for the performance involved. Thus on a negotiable note the lender may insist that someone not directly involved sign the note together with the maker to insure payment. This second person is known as a *surety* and may be called upon by the lender to repay the money at the due date.

A person may add his signature as guarantor to a note or other contract, and thus gives his promise to pay for the default of the original party if performance is not given on the due date according to the contract. This agreement differs from suretyship because the guarantor cannot be requested to perform until the original party has been requested to perform and has defaulted.

Contracts such as guaranteed notes or mortgages, construction contracts with surety bonds, and indemnity bonds for honest performance are numerous in business relations. Many questions of the respective rights and duties of the parties may occur. For example, if a guarantor or surety has performed the obligation,

what may he claim against the original promisor? Are defenses which the promisor might have used against the original party good against the guarantors or sureties? There is almost no end to the number and variety of such questions, and yet the businessman must know enough about these legal technicalities to be guided in his activities.

LABOR CONTRACTS

Many matters bear upon the successful administration of labor; in fact, running through labor administration are legal rules of which any manager must be aware if he is to avoid pitfalls. The labor contract is noteworthy in a number of respects. Most labor is hired under a day-to-day or hour-to-hour agreement. Few vested rights, therefore, are established for either party. The remedies allowed the parties for breach of labor contract are more restricted than those granted upon a general contract because the labor contract involves personal service. Courts will not, for example, grant specific performance of the contract—that is, they will not force a man to work. In a contract for goods, however, since it involves no personal servitude, the court frequently orders the seller to deliver the goods, to perform his obligations under the contract. Few awards for damages for breach of labor contracts are made. Since the employment agreement usually runs for such a short period of time it is more practical for the employer to hire another employee or for the employee to find another employer than to assert the legal rights of the contract.

General Contracts

The general legal relation is founded in the employment contract involving wages, hours, conditions of work, and risk. Generally speaking, the law has approached all of the controversial questions arising from the labor contract on the basis of the parties enjoying freedom of contract and of enforcing the agreement as made. A substantial portion of the doctrines in this field of law has been based upon an assumed equality of bargaining power in the employee and the employer. As the disparity of bargaining power has become apparent this assumption has been so

constantly challenged that this legal approach has been undergoing a great and important change. One of the first recognitions of this attitude was the declaration of public policy by the courts against employment contracts which bound an employee to forfeit any claim to compensation he might have for the negligence of the employer. Thus an employee's right to damages, under this doctrine, cannot be terminated as a condition of granting him employment.⁸

Conditions of Work

The typical individual labor contract makes few, if any, provisions as to the conditions of work. Under labor union or collective employment agreements, however, this is usually not true. Apart from contractual stipulations as to conditions of work such conditions may be prescribed by statutes. Laws regulating hours⁴ and wages⁵ in some industries or for some classes of employees are in existence in many States. These laws govern in such instances despite the terms of any private contracts.

The employer, in general, is bound to furnish a safe place for work, to furnish safe tools and appliances, to select competent fellow employees, and to enforce reasonable safety rules during operations. This apparently imposes sufficient liabilities to give an employee adequate coverage for working risks. As a matter of fact, however, it was discovered many years ago that under modern industrial conditions a worker is almost completely dependent upon his wages. Since other means of livelihood were not freely available, the legal liabilities of the labor contract bore more heavily on the employee than upon the employer. Much of

⁸ *Johnston v. Fargo*, 184 N. Y. 379 (1906).

⁴ The leading case is *Holden v. Hardy*, 169 U. S. 366 (1898).

⁵ The minimum wage laws were but recently—March, 1937—restored to effectiveness by the decision of the United States Supreme Court when it upheld the Washington law in the case of *West Coast Hotel v. Parrish* (Oct. term 1936, #293). This case overruled *Adkins v. Children's Hospital*, 261 U. S. 524, decided in 1923 as to the District of Columbia law which implied the State laws then in effect were unconstitutional.

Whether the provisions of minimum wage laws can be made applicable to *all* industry and to *all* workers remains a question of great doubt. The laws upheld have been based upon situations where it has been shown that public health and morals were concerned and therefore warranted the exercise of the police power.

this, it is to be admitted, was due to the common-law principles as well as to the conditions under which modern industry is operated.

Compensation Laws

These defects of the law in failing to furnish an employee adequate legal protection created a pressure of public opinion which caused the States to enact what are known as the workmen's compensation laws. At this date the laws are effective in all but two States.⁶ These laws place a responsibility upon the employer, even though not guilty of negligence. In effect, then, they provide a type of insurance against industrial risks which the employer is forced to assume.

The compensation laws as drawn in the several States, however, apply only to specified industries. The clerical occupations, agricultural workers, and domestic servants are in all instances exempt from the operation of the laws. Hence, employees in exempted industries rely upon the common-law rules of liability for compensation.

A scale of compensation by classes of injury is usually provided in the compensation laws. These provisions commonly cover (1) medical care, (2) temporary support during incapacity, (3) training for assuming a job in the event the injury has destroyed the original capacity. All of the laws provide for a waiting period before which no claim can be made. This provision is intended to discourage workers from seeking to take advantage of the law by claiming minor injuries.

Most laws provide for a schedule of legal service fees. This has done much to eliminate the criticisms which the public has made that legal fees consume such a large portion of the judgments obtained by the employee under common law.

In many instances these laws have set up independent administrative units known as the compensation commissions or courts, which afford the machinery to administer remedies more quickly, it is claimed, than if the case were handled through the regular court procedure.

⁶ See American Association for Labor Legislation, *Standard for Workmen's Compensation Law*, 1935; House Bill 246, South Carolina Laws, 1935; House Bill 29, Florida Laws, 1935.

A businessman must be fully informed on the compensation laws of his own State. Whether he assumes the liabilities directly or covers them by insurance policies for that purpose depends upon the provision of the law. Likewise, since all employees are not subject to the law, every businessman needs to determine whether the law is applicable to the particular class of employment in his business. On the other side, it is of even greater importance that an employee understands the risks which he assumes and the rights which he may possess under the law.

Social Security Law

Legislation providing for old-age benefits in a jointly sponsored State and Federal system was enacted in 1936. The law was held constitutional and placed in effect in 1937.⁷ This law set up by the Federal government provides for an excise tax upon employees and employers. Grants of funds are made by the Federal government to the States which set up laws of certain standards for this same purpose. The States are made the administrative agencies for the distribution of the pensions, the Federal government investing the tax funds it receives to finance the grants to the States. States which fail to enact laws do not receive grants from the Federal government for these pensions.

Competitive Labor Practices

In the course of competition between employer and employee, between organized and unorganized employees, and between two organized groups of employees many contested rights and liabilities naturally occur. These contests are inevitable in the competitive system as evidence of the bargaining process inherent in determining wages and conditions of labor.

Practices of Employers.—When an employer has secured the services of competent employees he is usually reluctant to give them up. An employer may guard himself against termination of the contract of his more valuable employees by specifying a time limit. Men who distinguish themselves in their employment, how-

⁷ *Charles C. Steward Machine Company v. Davis*, 301 U. S. 779; *Helvering v. Davis*, 301 U. S. 804; *Carmichael v. Southern Coal and Coke Company*, 301 U. S. 811. All these cases were decided by the Supreme Court of the United States on May 24, 1937.

ever, are usually sought by other employers. When an employee already under contract is induced to break it and join the organization of a second employer, the law would regard the original contract as enforceable and be favorable to granting relief to the first employer to prevent the second employer from knowingly causing the breaking of the contract.

The employer often seeks to influence the employees' membership in a labor union. The employee may be required by a "yellow-dog" agreement to promise not to join a union or, in the event of his joining a union, to cease his employment. Where the employment contract thus requires the employee to refrain from union membership it has been regarded as valid.⁸ This rule was under such severe scrutiny by public opinion that the Federal government in the Norris-LaGuardia Act of 1932 prohibited any action in the Federal courts which is based on a "yellow-dog" contract.⁹ It is likewise implied in the statement of unfair labor practices in the Wagner Labor Relations Act of 1935 and affects firms engaged in interstate commerce.

The employer frequently adopts another practice to bring an employee to accept his terms: he black-lists an employee either out on strike or after discharge from his employment. The black listing is done by a notice to other employers acting under a mutual agreement for exchange of such notices. The discharged employee is thereafter usually refused employment by other employers. Such a procedure has been accepted in common law as legal,¹⁰ though some twenty-five States have statutes prohibiting the practice. An agreement between the employers not to hire an employee on the black list is of disputed validity.¹¹ The black list, where used solely because an employee is a union member or organizer of the union, is another unfair practice interpreted to be within the Wagner Labor Relations Act and applies to firms engaged in interstate commerce.¹²

An agreement of employers in the same business not to deal

⁸ *Adair v. United States*, 208 U. S. 161 (1908); *Hitchman v. Mitchell* 245 U. S. 229.

⁹ 47 United States Statutes 70, c. 90, Section 3.

¹⁰ *Iron Moulders' Union v. Allis-Chalmers Co.*, 166 Fed. 45 (1908); *Willis v. Muscogee Mfg. Co.*, 120 Ga. 597 (1904).

¹¹ *Cornellier v. Haverhill Shoe Mfgrs. Assn.*, 221 Mass. 554 (1915).

¹² Sec. 8, Senate File 1954, 74th Congress, 1st session.

or negotiate upon a dispute with employees has sometimes been effectively used. The right is apparently a legal exercise of the competitive powers if not accompanied with threats or violence.¹³ It is at this point that the recently validated Wagner Labor Relations Act has a most important effect. Under the terms of this law employees may complain to the Labor Relations Board if the employer refuses to deal with the employees. The law applies if it can be shown the business is concerned with interstate commerce and that its actions tend to create an obstruction of such commerce.¹⁴ The Board in such a case may require the employer to treat with the bargaining agency determined at an election held under the Board's supervision.¹⁵

Practices of Employees.—The practice which employees first develop as a weapon to increase their bargaining power is action in concert. In the earlier views of the law such actions were regarded as conspiracies and unlawful combinations in restraint of trade, but the right of employees to combine is now considered entirely valid.¹⁶ The Clayton Act specifically exempts such concerted movements from the operation of the antitrust laws. Actions of informal groups in concert have naturally led to the creation of labor unions. The individual's right to join a union is clear, unless the privilege has been forfeited by contract or is prohibited by such statutes as the criminal syndicalism laws in some States.

The general objectives of organized labor for shorter hours and higher wages are not legally objectionable. Efforts to obtain these ends by inducing an employer to operate a closed shop—employing only union members—have possessed a doubtful status. Some courts have taken the view that such agreements are monopolistic and illegal,¹⁷ while others, in the spirit of Justice Holmes's dissenting opinion in *Plant v. Woods*, have upheld the agreement.¹⁸ Employees, too, may use reasonable means to compel an employer to hire only union members.

¹³ *Cote v. Murphy*, 159 Pa. 420 (1894).

¹⁴ *West Coast Hotel v. Parrish et al.*, Oct. term 1936, #293.

¹⁵ Sections 8 and 9, Senate File 1954, 74th Congress, 1st session.

¹⁶ *Stevedores' Assoc. v. Walsh*, 2 Daly N. Y. 1 (1867).

¹⁷ *Berry v. Donovan*, 188 Mass. 353 (1905).

¹⁸ *Kemp v. Division No. 241*, 255 Ill. 213 (1912); *Plant v. Woods*, 176 Mass. 492 (1900).

The Right to Strike.—Strikes conducted by labor unions or labor associations are both vital to increased bargaining power of the unions and common in our industrial life. It is clear that a person not under a contract would have the privilege to cease working at any time. If labor-union members endeavor in concert to break their working contracts they may be held liable for breach of the agreements. But where a group of employees not then under a time contract leave their employment demanding in concert certain contractual agreements before returning to work, a lawful right is being exercised.¹⁹ To go beyond this, causing other employees to cease their employment by inspiring fear by threats or physical violence is universally regarded as illegal. A sympathetic strike called to support union members in other trades where the sympathetic strikers have no complaint against their employer is usually regarded as illegal.²⁰ The union may persuade members to join in a strike, but it cannot coerce them by force, defamation, or violence.

In pursuance of a strike the employees may picket, that is, station men about the employer's premises for the purpose of persuading persons to refrain from dealing with that employer. Employees are ordinarily granted a right of "peaceful picketing,"²¹ but where picketing comes to the point of intimidation, most courts regard the act as unlawful.²² When a court finds such a condition it usually grants an injunction forbidding all picketing or it specifies the manner in which picketing may be conducted.²³

The current practice of sit-down strikes is illegal judged by all the established legal standards. Many writers feel and advocate that the law should develop a view of the employee's job that will legalize this method and will grant some type of a property right in the job. There is a fundamental clash in this suggestion with all property rights theories, but a reconciliation must be sought.

¹⁹ *Kemp v. Division No. 241*, 255 Ill. 213 (1912).

²⁰ *Pickett v. Walsh*, 192 Mass. 572 (1906).

²¹ *Iron Moulders' Union v. Allis-Chalmers Co.*, 166 Fed. 45 (1908); *American Steel Foundries v. Tri-City Central Trades Council*, 257 U. S. 184 (1921).

²² *Jones v. Van Winkle, et al.*, 131 Ga. 336 (1908).

²³ *Reed v. Whiteman*, 238 N. Y. 545 (1924).

Boycotts.—Organized labor commonly finds another bargaining weapon in the boycott. Refusal to work with nonunion men or upon material supplied to the employer by nonunion firms is a legitimate exercise of rights.²⁴ This action has been deemed illegal, however, whenever it is done solely to assist other employees in a controversy with their employer in another field.²⁵ A secondary boycott—pressure brought by union members upon third persons, such as requiring them not to use products of non-union firms—has been generally condemned.²⁶

Many controversies have arisen in connection with the efforts of employers to enjoin conduct of labor unions on the grounds that they interfere with interstate commerce. When the union sought to discourage other States from consuming the output of the stone quarries in Indiana which the union was seeking to organize, the Federal courts declared such acts to be in violation of the antitrust laws. Likewise where the union members destroyed mining property so that the output could not be sent into commerce outside the State in competition with coal of unionized mines the Federal courts enjoined the acts.²⁷ Alleged abuses of the injunction power in labor cases led to the enactment of the restrictions of the Norris-LaGuardia Act pertaining to Federal courts. This Act prohibits *ex parte* injunctions and requires a showing of the probable damages and the posting of a bond to indemnify the parties enjoined.²⁸

Civil Liabilities

Obviously anyone engaged in illegal acts in the course of the competitive struggle may be liable in civil damages to the injured party. The same act may, in view of State or Federal laws, constitute a crime for which such persons would be liable. In practice, however, the unions as organizations are difficult to reach because they are not ordinarily incorporated. An action in

²⁴ *Bedford Cut Stone Co. v. Stonecutters' Assoc.*, 274 U. S. 37 (1927).

²⁵ *Burnham v. Dowd*, 217 Mass. 351 (1914).

²⁶ *Auburn Draying Co. v. Waredell*, 227 N. Y. 1 (1919); *Hitchman, et al., v. Mitchell*, 245 U. S. 229; *Duplex Printing Press Co. v. Deering*, 254 U. S. 443.

²⁷ *Bedford Cut Stone Co. v. Stonecutters' Assoc.*, 274 U. S. 37 (1927); *Coronado Coal Co. v. U. W. A.*, 268 U. S. (1925).

²⁸ See p. 584, note 9.

such instances can only be brought against the individuals actually involved in the illegal act. This right includes officers and consenting members of a union and direct participants in the act, but it is one of dubious value in most cases. In this general situation many find cause for suggesting the incorporation of unions. It is contended that bargaining between two regularly organized forces—unions and employers—both under public supervision would give stability and contractual force to these important agreements.

S U M M A R Y

There are many special forms of contracts which involve particular legal principles pertaining to their limited subject matter. Among the first of these is the law of sales—applicable to goods. The buyer and sellers of goods have particular interest in the rules of this legal field as to the passage of title in the goods, and the warranties for the goods upon which the seller is liable. Bailments are a second important form of special contract and involve documents of title, as do sales, to a significant degree.

Insurance, negotiable paper, and guaranty and suretyship are likewise other special fields of contractual law. None of them can be minimized in favor of the other for all contribute their measure to commercial practice. Because the labor contract and associated problems represent a field of law that is undergoing great change in the current period of history its significance is obvious even apart from the important social and economic interests which are involved.

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P R O B L E M S

1. Why does not the "sales" division of law include all contracts?
2. What two important business liabilities are determined by the sales law?
3. Explain your concept of a warranty. In what circumstances are such rights implied?
4. Distinguish between a bailment and a sales agreement. What legal difference follows the distinction?
5. Name the common documents of title. What is the use of such documents?
6. How can an insurance policy be regarded as a contract?
7. What is a negotiable paper? What special legal results exist for this type of contract?
8. Identify a maker, an endorser, a holder in due course, and a surety as applied to bills or notes.

9. Just what should the owner of a note do when it matures? Why?
 10. Wherein does guaranty and suretyship differ, if at all?
 11. What commonly distinguishes the labor agreement from the usual contract?
 12. State the general liabilities of the employer in the employment contract.
 13. Does an employee have any liabilities under his labor contract? Be specific.
 14. What seems to you to be the greatest interests of the employee still untouched by the general legal rights?
 15. Trace the development of the right to strike and the present limitations surrounding it.
 16. Explain the nature of a boycott. What is the legal status of the boycott for the employer? For the employee?
 17. What is the legal status of labor unions as responsible units for their contracts? What is the responsibility of the unions for the conduct of their members? Weigh the matter from a practical point of view.

CHAPTER XXXVI

THE LEGAL FOUNDATION OF BUSINESS FORMS

Apart from the many ties in the commercial structure which we find resting on contracts, every business at its inception has to elect a legal form for organization. The choice as to these forms depends upon a great many questions which we may summarize briefly as follows: (1) What are the steps necessary in the construction of the business form? (2) Under a particular form what is the lifetime of the business organization, and what is the right to transfer individual interests? (3) What persons will exercise control of the business operations in the particular type chosen? (4) How can the management be conducted under the form? (5) What is the financial responsibility of the participant in the particular type? (6) What special regulations does the State exercise over the particular organization? If the various business forms are compared upon these various points, an intelligent choice can be made on the basis of the particular needs that the businessman has in mind for the conduct of his business.

The common forms which the law provides for the legal existence of a business enterprise are: (1) individual proprietorship, (2) partnership, (3) joint-stock company, (4) corporation and, in a few cases, (5) the business trust.

Proprietorship

Applying the series of questions which we proposed to the individual proprietorship, we find that there is no special procedure in the formation of this business type. True, there may be certain licenses required of anyone doing business of a particular kind, such as selling tobacco, but this has no reference to the business form. Such licenses are required of anyone in the particular business field, regardless of the legal form of the business.

The control of such a business form is obviously simple since the control rests entirely in the hands of the owner. The manage-

ment problems are usually simple, resting also upon the owner, though he may at his election hire someone to do such work with direct responsibility to the owner. Legally the owner is always held completely responsible.

The most serious drawback of the proprietorship form is its financial responsibility. The debts of this business form must be paid in full from the entire business and personal assets of the owner. It should be emphasized that the statement "entire assets" covers property of any description whether it has ever been utilized in the business or not. For example, if the owner possesses \$30,000, and sets up a business with \$10,000 of his funds and the business finally is closed with debts of \$15,000 of which only \$10,000 can be paid from the business assets the remainder of \$5,000 must be paid from the other wealth of the owner. This fact, of course, may contribute to the ease of raising capital, but it is also true that in the proprietorship but one man has the responsibility of making all judgments, which situation tends to create too great a risk for others to entrust the owner with their investments.

State regulation of the proprietorship seldom exists, except for the licenses and taxes demanded from all business. Here the proprietorship has a great advantage over other forms.

That the proprietorship is widely used in the American business structure is evident from the fact that in 1933 there were 1,500,000 proprietorships in the field of distribution.¹ If we added to this number the individual farming units,² the enterprises would swell to a number beyond 7,000,000. Although proprietorships number twice the corporations reporting for Federal income tax in 1931, they report less than a third as much net income.³ These figures clearly indicate that the place in which the proprietorship, as a business form, functions best is where close personal supervision counts for more than heavy capital investment, where flexibility in policies counts for more than stability of investment.

¹ *Statistical Abstract of the United States*, United States Department of Commerce, 1935, p. 771.

² *Ibid.*, p. 566.

³ *Ibid.*, pp. 177, 178, and 182.

Simple Partnership

The formation of a simple partnership rests upon a personal contract. No special form, no consent of the State is required. For such a relationship to be in the best possible form, however, like any other valued contract, it should be in writing and should clearly express the understanding of those who join it. The partnership may be created either in the simple partnership, or the joint-stock company form. Each of the forms must be examined.

The termination or dissolution of a partnership may be occasioned by lapse of time in the agreement, death of a partner, bankruptcy, judicial decree, by mutual agreement or by transfer of a partner's interest. The partner may sell his interest but he cannot force the purchaser into the partnership; instead the remaining members may insist upon a dissolution. A partner obviously is not quite so free as a proprietor to dictate his actions in relation to the business. The death of a partner may be provided against by special contractual provision which permits the surviving parties to take over the deceased's interest, but this fact creates a new partnership.

If a partner elects to break the agreement before its expiration, he may be guilty of breach of contract and may owe liability for damages. Of course, if all partners agree to undo their contract, that is, dissolve the partnership, they may do so.

Control of the partnership rests equally with each partner so far as the general law is concerned. Many States have special statutes permitting distinctions in this matter to be drawn in the contract. These distinctions are related to the financial liability and control of the different partners. But without special contractual agreement the law will generally regard each partner as the agent of the other. An agent is one who may represent his principal and bind him as if the principal were present and making the agreement. This fact is unusually significant because it makes possible endless controversy between partners. If in an ordinary business transaction one partner has presumed to answer for the partnership and the other partner disagrees with the procedure, serious controversy follows. Such disagreement creates loss of efficiency in operation.

The partnership form makes it possible to subdivide tasks

within the business and to assign a partner to particular tasks for his personal supervision and management. This is a distinct gain over the individual proprietorship, for as it is commonly said, "Two heads are better than one."

The liability of each partner for the financial obligations of this business form is unlimited. Each partner is liable to creditors for all of the partnership debts. That is to say, this business form goes beyond the partner's capital contribution for it makes each of them liable for the whole. As between the partners, of course, the law makes each partner liable to the others for his proportionate share. It is this difference in liability which makes for the unusual risk in the financial relations of a partnership. There is, however, a clear advantage of the partnership. It may be able to raise more capital than a proprietorship since the partners, with their combined resources, may command a greater credit rating.

It should be pointed out that where the persons involved in the partnership have undertaken to create one with special rights and limited liabilities for some partners, the contract should be placed on the public record wherever the local laws make such a recording possible. In other words, where States make the necessary provisions, a legal device permits the agreement to relieve some partners of unlimited liability while the others continue to bear that burden.

This particular form of business organization is likewise free from State regulation beyond the usual regulation, taxation, and license fees affecting all business enterprise. This is a valuable distinction.

Joint-Stock Company

Joint-stock companies are created by partnership agreements prepared in articles of association. In some jurisdictions the articles must be filed with the State recording officer. These companies were the forerunners of the corporate organization. Formation rests upon a contract executed between the members of the company, which provides for the ownership by members of share units in the enterprise that may be transferred to other persons who would thus become members. The life of the company will in no way depend upon the lifetime of the unit owners, but will continue for the time stated in the contract or articles.

The control in these companies rests in all the owners of units, for each one has a voice in control—the proportion of the number of units held to the whole determining the number of votes. At this point, then, there is a distinct contrast with the ordinary partnership, where every partner has identical voting power.

The contract or articles ordinarily include a specification for the limitation of liability to the amount contributed by the unit holder. To make this agreement effective, however, it must appear in all the contracts made by the company; otherwise, as in any partnership, there is full liability by all owners to the creditors.

The management in a joint-stock company is usually surrendered to persons employed to operate the enterprise. These managers need not have an investment as unit holders in the business. This is a distinct departure from the preceding forms. Separation of the functions of raising capital and of operating the business is a distinct advantage. Since limited liability can be provided, this form of partnership is therefore adapted to the raising of large amounts to finance an enterprise operated by hired managers.

State regulation of the joint-stock company is nominal in many jurisdictions; others treat it as they do corporations. There is a large degree of freedom from the special regulations to which corporations are frequently subjected unless statutory regulations decree otherwise.

The simple partnerships number probably less than a half million in trade and manufacturing in the United States, and in 1932 reported less than 4 per cent of the total net income in the Federal income tax reports.⁴ Joint-stock companies are rather uncommon in the United States, the Adams Express Company being typical of the few that exist.

Corporation

Another form of organization available to the businessman is that of the corporation. This form is an arrangement whereby, with the consent of the State—in the form of corporate charter—

* *Statistical Abstract of the United States, 1935*, p. 185.

persons are authorized to create a new and artificial legal person. The law endows this artificial legal person with the general powers of conducting business in the same manner and with the same legal relationships as a living person. In other words, this business organization is understood to represent a relationship distinct from the persons who form it. The charter, of course, is the first tangible evidence of the existence of this form of organization.

Charters.—Since the consent of the State is required to create this form, it is obvious that it may dictate the terms under which that consent will be granted. The various States, therefore, have statutes dealing with the creation of corporations. Many differences will be found between the States in the requirements set forth in these statutes. It is for this reason that the particular State in which the charter of a company is obtained becomes a matter of considerable study and often of great importance for the corporation. For example, for certain types of business many States will refuse charters which others are willing to grant. Or again, some States may exact heavy fees and assess annual taxes of a special nature for the privilege of creating and operating a corporation, while others may impose no special fees and taxes.

Thus it is seen that the corporate form of organization requires a special procedure in its formation. The exact rights and liabilities of the organization will be determined by the statutes of the incorporating State. The business selecting this form assumes special burdens.

The charter obtained from a State usually stipulates a period of time for which the company will be entitled to exist as a corporation. These charters may run for 50, 100 years, or in perpetuity. Usually it is but a formality to have the charter extended at the expiration of these dates. The death or incapacity of any of those persons interested in the chartered corporation will not affect its existence, for the corporate existence is an impersonal one. The contrast between this form and the proprietorship or partnership is obvious.

Stockholders.—Those persons who purchase contracts in the form of stock from the corporation are entitled, so far as the law is concerned and until the parties themselves agree to the

contrary, to a vote for every share. In other words, stockholders are technically in the position of control by use of their voting power. Actually, however, any one of the policies of the company may be determined by a majority of those voting, so that control may rest in a group representing 51 per cent or less of all the stockholders. In meetings where some stockholders do not attend, the control may be exercised by a group, a majority in that meeting, but actually a minority of all the holders in the company. This latter point is significant in the present-day tendency to let control pass into the hands of a few stockholders, thereby allowing concentration of the determinative function of business to an unusual degree.

Directors.—But it should be made clear that the stockholder is only one of the divisions in the control of the corporation. The other division is the board of directors, a small group usually elected from among the stockholders. The board of directors throughout the life of the business pass continuously upon the policies of the concern. Judgments in greater number and importance will be made by this group than by the stockholders. In practice the board is the hub in the control of a corporate enterprise.

Officers.—While there may be overlapping between those who control a corporation and those who manage it, it is common for corporate enterprise to have a distinctly different group in charge of the management functions of the business. These managers are called the officers. That these officers are elected by the board of directors is another instance of the important powers exercised by the board.

The officers in daily control of the business are charged with its operation and supervision within the limitation of policy laid down by the board of directors. The usual officers are the president, vice-president, secretary, and treasurer. The functions of the secretary and treasurer are rather obvious from the title. The president is usually regarded as the final authority in any one of the phases of the business. The vice-president, regarded as an assistant to the president, is usually charged with one or more particular fields of the business and is often regarded as the logical successor to the president.

These comments may not apply to the small corporation be-

cause the control may be exercised by the persons who act as officers. In such an instance the president may be the majority stockholder and he may elect to the board of directors those persons who will accept his suggestions. The other officers in such instances may be in the position of mere employees, so to speak, of the president. These facts, of course, depend upon whether there is a clear segregation between those who invest the capital and those who operate the business.

Limited Liability.—A special distinction, and perhaps the most vital business one between the corporate form and all the others, is the limited liability for debt assumed by a stockholder. By his purchase of stock a stockholder becomes an owner of a contract issued by the corporation as a legal person. This contract entitles the owner to certain rights and liabilities. The chief liability is for the payment in full of the stock. Once that stated sum has been paid no other call can be made upon the owner⁵ for contributions when the corporation encounters financial difficulty. Thus when creditors find it necessary to close a corporate enterprise, they may recover in satisfaction of their claims only the property of the corporation. This property, of course, is distinct from the property of the individuals who became stockholders. At the outset it was pointed out that a corporation in the eyes of the law is another person entitled to engage in business with its property and credit. Creditors, therefore, cannot go beyond exhaustion of the corporate property to collect.

Possibility of a division between control and management and the uninterrupted existence of the organization combine to appeal widely to persons contributing capital. These factors contribute definitely to making this form of organization especially adapted to financing extensive business enterprise. The use of corporations has grown at a swift rate because these advantages fit them especially to the factors which large-scale production demands.

Regulation.—The corporate form of organization is unusually susceptible to regulation by the State. It was pointed out

⁵ Statutes of the several States may impose special liabilities beyond this as in the case of double liability for bank stockholders.

that the corporation exists by virtue of the consent of the State. As a consequence, the State may regulate this form of enterprise extensively, since it controls the very creation of the form. These regulations usually take the form of special limitations as to fields in which the business may enter, as to State supervision of financial or managerial policies, and as to special forms of taxation. This latter matter of taxation has come to be a specially notable deterrent to the use of corporate enterprise for small businesses. Outweighing the advantages of limited liability and their increased ability to raise capital, such special taxes as have been levied against the corporation may force many small businesses back into the earlier forms of partnerships and proprietorships.

Business Trust

A business organization may be created in a form known as a *business trust*. This means a form of contractual agreement typified by the surrender of property to a trustee who is charged with its management for the benefit of persons named in the trust agreement. This organization form is not the one which a layman terms a "trust." In this latter sense, the layman generally means an agreement between business firms to operate in restraint of competition. It is necessary that we make a clear distinction between the two usages of the term; the use here is that of the legal origin.

A business trust as a device for organizing a business, therefore, is set up by an agreement between the contributors and persons receiving the property, known as the *trustees*. The trustees are placed in control of the property and are expected to operate within the limits established in the original trust agreement. The control of the trustees would be absolute for the period of the agreement, say twenty-five or forty years. This, of course, is disadvantageous as compared to a corporation. Those who receive the benefits of this agreement would have certificates to represent their interests, which certificates would be transferable. The liability would be limited to the property surrendered to the trustees. and no persons participating in this organization would be individually liable.

This form of enterprise, therefore, has the distinct advan-

tage of being free from special legislation normally effective against a corporation. Yet this organization, by the sale of its trust certificates, can raise considerable amounts of capital. It will have a long life and its interests or certificates are freely transferable. The big drawback rests in the company's surrender of control to the trustees. In most cases, therefore, this form would be selected by a group already closely associated, perhaps because of family connections or long-continued operations of a business by the same interested persons. An example exists in the case of New England Gas and Electric Association.

We find this form in use in Massachusetts more than in any other part of the country. In so far as statutes do not prohibit its use, there is every reason to believe that the form may be used to a greater extent if the burdens laid upon corporations by regulations and taxation continue to grow.

Summary

Each business enterprise must be created in a particular legal form. The rights and liabilities of the parties in the various legal forms are different, the responsibility to the State is different, and the control of the enterprise may be centered in different persons. These facts make it wise to understand the variations and, with proper consideration for all the aspects of the enterprise, to select the legal form for the particular purpose with all these matters in view.

Although the proprietorships and partnerships outnumber all other legal forms in the American business system, they do the smaller portion of the business. These forms of organization are adapted to enterprises necessitating personal supervision and requiring relatively small amounts of capital investment.

The aggregations of capital which modern production methods make so very advantageous are easily provided by the corporate form. This advantage, together with the possibilities of separating ownership from active management, has caused the corporate form to become conspicuous in American business life. In fact, the American business structure built around the corporation is unique for the volume of capital invested, the volume of production controlled, and the quantity of labor employed by them.

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So much is this true that the problem of social regulation of the corporation has become outstanding.

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P R O B L E M S

1. Discuss the following: (a) "A proprietorship has no managerial problems"; (b) "Partners share the profits in each case on the basis of capital contribution"; (c) "A corporation is both owned and operated by its stockholders."
2. How do you distinguish the business trust from the corporation?
3. Which of the organization forms is regulated to the greatest extent? Why?
4. Explain why the matter of the continuance of the business form should bear on the choice of legal form.
5. Review the various rules of liability to creditors for the different legal forms.

6. Cite the situations as to control and management of corporations that have aroused severe criticism. Support your view of the situation.
7. Compare all the legal forms as to the process of formation and as to taxation.
8. What relationship does the volume of capital used have to the legal form of a business?

CHAPTER XXXVII

THE LAW OF PROPERTY

In the modern economic order there is no more important legal concept than that of private property. It has been the fundamental principle of this competitive order that the maintenance of private property in things stimulates and increases efficient economic activity. Because the economic order is an exchange society the entire subject matter of these exchanges necessarily involves property. We mean by private property, of course, the complete right of the owner to the use and enjoyment of the subject matter —this right we know as ownership. In as complicated an order as the modern one of today it must be recognized that private property can be used only within the limits permitted by society. In other words, private property as a part of the present economic order is maintained because private ownership serves as an inducement to the creation and the wise use of wealth, giving the present economic order, it is believed, better results than any other type of ownership would afford.

Classes of Property

Property is ordinarily classified into the two general groups: personality and realty. The former group is thought of as including those things which are movable—are capable of being taken anywhere by the owner. Realty is usually described as being immovable; it includes land and all things permanently attached to the land. It is of interest to point out that in the medieval and ancient worlds realty was the common form of wealth, whereas under the modern industrial exchange society personal property has assumed an importance probably equal to or beyond that of realty.

Personality.—Personal property embodies the two classifications of intangible and tangible personality. The intangibles consist of rights gained by the making of contracts. The property

has no distinct existence; rather it is a right. Some common intangibles are stocks, negotiable notes and checks, and book accounts. These items of property, of course, have no existence except in legal concepts. Tangible personal property needs little explanation, though in practice the border line is often close. This classification includes the common articles of commerce such as machinery, furniture, clothing, and the like, all of which have value in and of themselves because of their physical existence.

Realty.—The term *realty* also includes a great variety of property forms. Thus fixtures permanently attached to buildings (as radiators), growing trees and shrubs, growing grain, and minerals in the ground, for example, are all considered realty. The fact that there are numerous forms suggests that the law cannot be uniform in respect to every class of realty.

Rights in Property

The claims which an owner may have upon property vary greatly in the degree of right which he possesses for the use and enjoyment of the property. The first broad distinction that we can lay down is that between a freehold and a non-freehold estate. A freehold estate entitles the owner ultimately to every property right possible in the subject matter. These rights may be classified as including use, mortgaging, disposition, and possession. A person may possess these rights in fee simple, without any limitation; in a conditional fee, subject to an event; and during a lifetime, a life estate.

A non-freehold estate indicates a property right which is limited in time, giving a right of possession and use for that time. This right we more commonly call a *leasehold*. Such a right is gained by the consent of the owner of the freehold, who grants the lease to another for a time stated, subject to the owner's will, or from year to year. Usually the owner of the freehold bargains for a payment called *rent* to compensate him for the loss of the possession and use of the property. When the leasehold estate terminates, all the rights of the property revert completely to the owner of the freehold.

More than one person may have an interest in the same property. Such persons have a right in which they are known as joint

owners. Rights in property may be vested, entitling the owner to immediate enjoyment; they may be for the remainder, entitling the owner to enjoyment after expiration of the present vested estate; or they may be in an estate in the future, entitling the owner to the enjoyment only after a certain event has occurred.

Transfer of Rights in Property

Ordinarily the law has endeavored to make the rights in property freely transferable. This privilege has been granted in order to encourage the commerce and economic activity that is based on the free flow of exchange operations. A transfer is usually executed by contract during the life of the owner. Any owner, of course, has the power to transfer his property by gift.

The transfer is considerably more formal in the case of realty than otherwise. If the complete ownership is to be disposed of, it will require a deed—a formal document in writing, executed in accordance with the registration act of the particular State where the realty is located. The procedure is well defined and deserves to be carefully followed because land titles must be clearly described and carefully transferred. The pressure for speed in ordinary commercial transactions makes for a lack of formality in the transfer of personality. Often the transfer is indicated only by the physical exchange which takes place as a result of the bargain between the parties. A number of auxiliary evidences of the transfers of personality in commercial practice exist, of course, in the order slips, invoices, and correspondence. Informality is the rule in order that transactions may be effected quickly. This makes it none the less desirable, however, to keep accurate records of the agreements and property transfers, even though the law does not prescribe an exact form.

Descent of Property.—Our legal system accords the right to transfer interests in property even beyond the life of the original owner. That is to say, our property system includes the right of inheritance and permits the descent and distribution of the original owner's property to others, usually the members of the deceased's family. The law goes a step further and in addition accords the original owner the right to make a will. This is a stipulation by the owner instructing the State how he desires his prop-

erty to be distributed. If this document is proved to possess a certain form, that it was made by a competent person, and without fraud, duress, or undue influence, the courts will ordinarily enforce it.

In the absence of a will the statutes of the individual States prescribe the procedure that the courts follow in the distribution of the property. Since this privilege of property descent is accorded by State law, it is subject to control by the legislation of the State. A modern tendency in such legislation is to levy special taxes upon this right of distribution, for many believe it wise social policy to force the breakup of large individual fortunes through the imposition of these taxes. In addition to the State inheritance taxes there is also a levy made by the Federal government.

This matter of descent and distribution bears little direct relation to business, but it can become very important through its influence on the position of business creditors. Through inheritance a debtor who has previously lost the capacity to pay on contracts already made may be enabled to discharge his obligations. Consequently the creditor has an interest in the question of descent and distribution of estates.

Mortgages

A mortgage is a common form of document by which a debtor grants security to his creditor for the performance of a contract. These documents, in general effect, are conveyances of the property described by the agreement that become null and void when the obligation for which the mortgage is security is fully and faithfully performed. Mortgages given on real estate are spoken of as *real-estate mortgages*, while the mortgages given on tangible personality are called *chattel mortgages*.

The actual form of the mortgage is somewhat technical and formal. It is to be noted first that there must be an existing obligation to which the mortgage becomes a supplement. The most important detail in writing a mortgage is an accurate description of the property granted as security. Since the mortgage forms used in the various States vary to such an extent, there is little to be gained by attempting to describe them.

The property which can be mortgaged and granted as security

raises some special problems. In a farming community chattel mortgages are frequently given on growing crops. This raises a question as to whether the creditor has an existing mortgage so long as the crop itself has not matured. Moreover, in the case of such crops as hay or the yield of orchards, there may be a question as to whether the property shall be treated in the same man-

614—CHATTTEL MORTGAGE—Short Form		The Standard General Supply House, Lincoln, Neb.
<p>The undersigned, of County for the purpose of securing the payment of DOLLARS</p> <p>and interest according to the conditions of promissory note, of even date herewith payable , 193 for \$ do. hereby still and mortgage unto</p> <p>and its assigns, the following described property, now in possession, to-wit:</p> <p>[Large blank area for property description]</p> <p>owned entirely by us without any encumbrance.</p> <p>This mortgage is intended to include the increase of any stock above described. The above described property is now kept on Quarter of Sec., Twp., R., County.</p> <p>Provided, That if the undersigned shall fail to pay the said debt that this mortgage shall be void. And it is hereby agreed that if default be made in the payment of any debt secured by this mortgage, or if the amount due thereon be in excess of my present and primary debts, Costs, damages, or if at any time the sum of said note shall exceed the said debt, demands, or expenses, he is hereby authorized to enter upon the premises where the said property may be, and remove and sell the same at public auction or otherwise to have and to hold the same for the payment of the amount so owing on said note, with all expenses incident to the same, reserving to the undersigned the right to bid for the same at the time of sale, and then take same, with damage unprovided.</p> <p>Witness: hand, and seal this day of 193 WITNESSED { [Large blank area for witness signatures]</p>		

FIG. 53.—Chattel mortgage form.

ner as annual grain crops. Most courts make a distinction upon these points. The validity of a mortgage in any State is determined by the rules of that State.

It is not uncommon for the creditor to require the debtor to add to the description of his present property a statement that his "after-acquired" property will be subject to the terms of the mortgage. This clause is intended to take effect against any property coming into the ownership of the debtor after the date of the mortgage. It is usually a good provision and a very common one in corporate mortgages.

Registration.—A mortgage must be placed upon the registration records of the State where the property is located. In offices regularly provided for by State laws these instruments will be received, copied, and indexed so that any person may check through the record for mortgage contracts existing against individuals or property. The exact requirements of these registration statutes vary from State to State.

Mortgages are regarded as being transferable along with the principal debt itself. That is, a mortgage is a document given as a supplement to a debt obligation. When the debt is sold, the security goes with the debt in the transfer, though a recorded assignment should be placed upon the records.

Remedies.—A mortgage instrument becomes invalid as between the parties by the performance of the original obligation. A formal entry should be made of the performance, however, by the filing of a release upon the registration records where the mortgage was filed. In the event that the performance fails, the holder of the mortgage is entitled to his remedies. The creditor at this time has the choice as to whether he will foreclose the mortgage or whether he will sue on the debt alone. The latter action ordinarily can be pushed through the courts in less time, but a judgment on such a claim may force the creditor to share the assets along with other creditors. The creditor, therefore, will normally sue for foreclosure because the mortgaged property gives him a specific security ahead of general creditors that should result in a higher ratio of payment than by the other right.

The process of foreclosure is well defined by the statutes of the several States. It is usually designed to permit a period of redemption during which time the debtor will have the right to tender payment and recover his property. If the debtor cannot pay, the foreclosure process requires that the property be put up for sale at public auction. This auction is to avoid private bidding where the creditor might gain valuable properties at the expense of the debtor, for presumptively at a public sale the price will reflect the current market value. When the court is convinced that the sale has been fair and equitable it orders a conveyance of the property to the creditor; thus the property right of the debtor is foreclosed—cut off.

Under the usual law the unpaid balance left after the sale of the property under mortgage can be collected by the creditor out of any other assets owned by the debtor. This process is known as a *deficiency judgment*. In a number of States since 1933 this privilege has been restricted by statutory enactment.

Pledges

Security in a form known as a *pledge* is commonly used. These agreements affect the intangible personal property group more often than tangible property, but both are subject to this form of agreement. The general nature of the agreement has the same effect as a mortgage, but the legal form is more simple and may not involve the procedure of foreclosure to enforce it. The chief distinction of this agreement is the fact that the debtor turns the possession of the property over to the creditor during the term of the pledge.

Typical instances in which pledges are utilized are the deposit of stocks and bonds as collateral for loans, or the deposit with the lender of certain warehouse receipts and bills of lading under pledge. These documents of title, being representative of the goods, amount to giving the goods themselves as security.

No special procedure to enforce a pledge is ordinarily required, though the contract itself frequently stipulates what the creditor may do in event of default. These stipulations very commonly allow the lender to choose whether he wishes to sell the property at public or private sale and gives him the right to apply the proceeds to the debt. This form of security is highly developed and is often utilized in the commercial centers because of the ease and swiftness with which it permits security to be granted and likewise to be applied in payment.

Summary

Property in its many forms, being the subject of all exchange operations in the economic order, assumes a position of great importance. A knowledge of its nature and the usual procedure is essential to businessmen. The usual divisions of property between the realty and personal forms are significant because of the differences in mobility of the property, the formality of

transfer, and the responsibilities of the owner. There are many varieties of interests which one may possess in property. For a businessman special importance attaches to mortgages and pledges in view of their frequency in commercial practices. Because of the importance of legal rights in certain business transactions it is essential that the businessman be trained to recognize, at least, the legal aspects of business problems. At the same time he should realize on what occasions he should seek the benefit of legal counsel.

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PROBLEMS

1. State the distinctions outlined as to realty and personality.
2. What is meant by an "estate" in land? Indicate some of the classifications of an estate interest.
3. Why should the preparation and recording of deeds be so formal? Why not the same for a shipment of goods?
4. How would you describe a mortgage? Is it a debt instrument?
5. Is there a difference between a mortgage and a pledge? How is a pledge used in commercial practice?
6. What relationship may the records kept by a concern have to its legal property rights?

CHAPTER XXXVIII

BUSINESS FAILURES: RECEIVERSHIP AND BANKRUPTCY

The risks which have been cited repeatedly as existing in the business world should make it clear that business success is not easily won. In fact, one of the most outstanding facts in commercial statistics is the number of business firms that fail every year, leaving large sums in unpaid debts and involving the complete loss of invested capital.¹ The legal steps involved in a business failure constitute a special field of legal relationships which should be briefly inspected.

BANKRUPTCY

Bankruptcy is that procedure taken for the purpose of closing out the business, liquidating the assets, and distributing the proceeds to the claimants. In other words, bankruptcy is primarily a liquidation process. The secondary purpose of the procedure is to grant the bankrupt a legal defense against the collection of claims created prior to the bankruptcy so that the bankrupt can begin again. In this new beginning, the defense of the bankruptcy procedure will protect him from embarrassment or legal judgment in behalf of the former claimants. The debtor is free, in other words, to start anew in the operation of business.

Bankrupts cannot however be excused from the following claims :

- (1) Taxes.
- (2) Obtaining property on false pretenses.
- (3) Liability for wilful injury.

¹ *Statistical Abstract of the United States*, United States Department of Commerce, 1935, p. 288. In 1934, out of 1,900,000 commercial firms, a total of 12,000 failed; the peak was reached in 1932, when 31,000 firms failed out of slightly more than 2,000,000.

- (4) Liability for support of wife or child.
- (5) Liability arising out of fraud, etc., as a fiduciary.
- (6) Wage obligations incurred in last three months.

For practical purposes bankruptcy in the United States is exclusively a Federal matter under the law of 1898 and amendments. Hence there is less conflict of jurisdiction as between the Federal and State courts than in the case of receivership.

The procedure of bankruptcy is begun either voluntarily by the bankrupt or involuntarily by a creditor if \$1,000 or more is owed. Certain portions of our business structure ordinarily cannot be forced into bankruptcy.² For example, neither a farmer or a railroad corporation can be subjected to the bankruptcy procedure by creditors. But a farmer may voluntarily apply for bankruptcy. These distinctions are made because of public policy.

Acts of Bankruptcy

In those instances where creditors may bring the bankruptcy action, it is essential always to allege one or more of the acts of bankruptcy. These allegations include the claim that the business or person is insolvent—incapable of paying the debts as they mature; has paid some creditors, or has admitted in writing the inability to pay and willingness to be adjudged bankrupt. A voluntary bankrupt need only plead insolvency.

Estate of Bankrupt.—If the court is convinced after a hearing that the acts of bankruptcy or one of them exists, it orders a referee and a trustee in bankruptcy, selected by the creditors, to take over the assets of the bankrupt. Both referee and trustee are the delegates or officers of the court. Since the trustee reports the assets of the business, the claims to be made against it must be filed with him. Correctness of allowing or disallowing these claims will be debated before the referee. Appeals from the referee's decision, of course, may be made to the court. After all claims have been either allowed or disallowed by the referee, the trustee will proceed to dispose of the property and, having re-

² Any corporation except a municipal, railroad, insurance, banking corporation, or a building and loan association may become a voluntary bankrupt, and any moneyed business or commercial corporation except a municipal, railroad, insurance, banking corporation or a building and loan association is subject to involuntary bankruptcy.

duced it to cash, to disperse it upon the order of court to the various claimants.

Discharge of Bankrupt.—When this procedure has been completed and the necessary showing has been made, the court will order the bankrupt discharged. This bankruptcy decree or discharge bars any action or claim which could have been made against the bankrupt at any time prior to the bankruptcy.

Recent Bankruptcy Laws

Extensive additions and alterations in the bankruptcy law have occurred in the last four years.⁸ Sections have been added which permit even municipalities and other governmental divisions to go through bankruptcy procedure in order to reduce or liquidate their indebtedness. Extensive rights of bankruptcy have been created in reference to corporations, including railroad corporations. Particular interest centers upon the power granted the courts to force an acceptance of a reorganization plan upon all claimants of the concern when two-thirds of them have consented to the plan. That is to say, in cases in which dissenters might normally force the sale of the properties, this new procedure permits the dissenters to be forced into line with the majority. This permits the return of the business to normal operations under an acceptable reorganization plan with less delay and expense. This legislation, enacted to meet the need and urgency of the deflationary period following 1929, permits a more orderly process of reorganization to take place and avoids the serious results of actual liquidation of important business concerns.

Other additions and changes in the law grant the same right of debt compromise to farmers. In other words, the law permits a farmer to create a debt plan which, if acceptable to two-thirds of his creditors, may be put into effect by decree of the court.

⁸ Debtor relief sections are essentially included in:

- (1) Sec. 73. For persons other than corporations to effect composition of creditors.
- (2) Sec. 75. For agricultural relief.
- (3) Sec. 76. For persons secondarily liable.
- (4) Sec. 77. For interstate railroad.
- (5) Sec. 77 A and B. For corporate reorganization.
- (6) Secs. 78-80. For municipal debts.

This gives the farmer a compromise agreement upon his indebtedness. This law, like that which relates to the corporation, was modified to its present form to avoid the demoralization that comes with the efforts to sell out the ownership of great numbers of operators, either of farms or of businesses.

R E C E I V E R S H I P

Nature and Purpose

Receivership was developed originally by the early English equity courts as a procedure to prevent waste and to conserve assets. It is now used as an auxiliary procedure to bankruptcy, and although various statutes regulate receivership, it remains essentially an equity matter. The courts developed a process of receivership out of the necessity of taking over and continuing the operation of business properties while the best disposition to be made of the business was being determined. This course might lead in either one of two directions: towards reconstruction or towards liquidation. The courts recognize, however, that in such instances as important railroads it is almost impossible to liquidate the property. The public necessity of keeping such firms in operation is so great that the courts recognized that some action would have to be taken that would lead to the reconstruction of the concern. Thus the purpose of receivership is to conserve property and permit the continuance of operations so as to lessen the loss of public convenience. In these cases the court acts through a receiver it appoints to take over and run the property.

Since we have legal administrative systems in both the Federal and the State courts, we should note that both have jurisdiction in receivership matters. There are both State and Federal statutes upon receivership, but certain receivership actions may properly be brought only in Federal courts. The choice is usually left to the parties requesting the receivership, whether it will be in the State court or in a Federal court.

When the firm is subject to receivership there are several essential elements of the petition. The application must indicate that the firm cannot meet all of its obligations as they come due. Second, the property of the business must be demonstrated to be

subject to waste or disruption if embarrassing legal actions arise. Finally, the petitioner must show that he is a secured creditor of the firm and that a receivership is necessary to protect his security.

Powers of the Court

If the court accepts the receivership application, the properties of the concern are immediately considered to be within the custody of the court. This is an important principle because it follows that a court cannot be sued for obligations of the concern, and in the course of future business operations burdensome contracts may be abandoned. That is to say, since the court, through its officer, the receiver, has accepted the responsibility of operating the concern in order to save the business, the court is entirely free from existing contracts in so far as the holders have a right to reduce them to judgment or to insist upon their enforcement.

Because leases and purchase contracts that are disadvantageous may be canceled, such an arrangement permits the court to put operations back upon a level that will support the concern. Judgments of creditors, moreover, cannot be enforced, nor can the assets be taken from the concern. Consequently, the earnings and assets can be held within the business for its development. Had the firm attempted to operate without the benefit of the custody of the court neither of these things would be true. A judgment levy by a creditor may otherwise take the cash and materials in satisfaction of the judgment and disrupt commercial operations. Persons with burdensome contracts may insist upon the performance of the contract or take action similar to that taken by a judgment creditor. Either of these events may be enough to so disrupt the normal operations of the business as to create a complete failure.

During the custody of the court, the receiver directs all his efforts toward placing the property upon a successful operating basis. To this end the receiver, upon court order, may enlarge the plant, renew the equipment, and employ additional workmen. This is especially true of a business involving great public interest. The receiver may be authorized by the court to finance this work by borrowing money upon receiver's certificates. These instruments have the protection of the court and will be paid before any other claims. In such circumstances, if there is any possibility of oper-

ating the company successfully, it should be developed in the course of the receivership so as to provide a basis upon which to predict whether the enterprise could be successfully reorganized.

Reorganization Plan

If a company is to be removed from receivership, one of the two patterns must be followed: liquidation or reorganization. The former will follow the usual legal steps in bankruptcy—sale and distribution of assets. The latter, reorganization, will involve the adjustments of a great many contractual rights held by varying persons, some creditors, some stockholders. The reorganization plan must provide for rearrangement of the rights of the several parties. The difficulties that led to the request for receivership need correction. The rearrangement must conform to the facts developed in the course of operation. Since the firm was unsuccessful originally, some of the creditors will have to make a sacrifice and forego some of the rights they once possessed. Who shall be asked to sacrifice and how much? This problem can only be answered by the work of the reorganization committee. When the committee has prepared a reorganization plan, the parties will be asked to approve it by depositing their securities or their claims under the plan to which they wish to consent. When a set percentage of each series of claimants has accepted the plan, it will be proposed to the court as the basis on which the firm should be removed from receivership.

Objections to the plan, even though it has been adopted by a great majority or great share of the different claimants against the company, may be made by those who wish to dissent. The court will hold a hearing upon the plan and will receive a dissenter's statement of opposition. Upon the evidence produced and in its discretion the court must determine whether the plan seems feasible and fair, or whether the dissenting group has established points upon which the plan is inequitable. If it be the latter, the court will undoubtedly order a rearrangement of the plan to meet the defects pointed out.

In those cases in which the reorganization plan has been promoted by the common consent of the security holders and when there are not too many dissenters, it may be possible to reorganize

the company by the mutual agreement of the interested parties. On the other hand, if there is a group of people who apparently will never consent, and yet the majority has accepted the plan, the court may order foreclosure upon the various liens and the property sold.⁴ In this event, the new corporation is created upon the basis of the reorganization plan. People who have consented to the plan exchange their old securities for the securities in the new corporation. Under the usual legal rules of distribution, those who failed to join the plan are given their share of the remaining assets after the foreclosure sale.

The sale of properties under this forced sale proceeds in the usual manner of mortgage foreclosures. After the sale is held, a report indicating the bids for the property is returned to the court. The court now takes the last step, known as the *confirmation of sale*. At this point there is further opportunity for protest and hearing upon the unfairness or inequity of sale. The court, according to its discretion, may order the sale repeated or it may confirm the sale. In the latter event, the court will order a deed to be given to the purchaser, who now assumes the properties for the purpose of operation in its newly created form. After the settlement of all claims in the manner prescribed by the court, the receiver is discharged and the receivership is closed.

S U M M A R Y

A businessman does not ordinarily contemplate failure, but history records a great number of business failures. The law has been particularly concerned in establishing a procedure for administering the liquidation of a business which has failed. This procedure, known as *bankruptcy*, aims to give creditors an equitable distribution of the remaining assets and to relieve the debtor of further liability for the debts. The discharge in bankruptcy gives the debtor a fresh start, but at the same time it creates credit losses for the investor that he should thereafter seek to avoid.

A secondary procedure, known as *receivership*, has been developed by the courts to protect the assets of concerns in financial difficulty and to conserve those assets for the protection of the

⁴ See the special provisions of bankruptcy law to force dissenters to join a plan.

creditors. Receivership assumes a growing importance as business enterprises increase in size and draw upon the capital of great numbers of investors. While it is in receivership the property of a concern can frequently be restored to efficient form and many of its burdensome agreements abandoned. Through the device of receivership a reconstruction of the financial structure is usually effected so that the business can resume its normal place in commercial life. Should the reconstruction under these favorable circumstances be unsuccessful, the enterprise must ordinarily be liquidated. In these ways the legal procedures of both bankruptcy and receivership assume a place in the economic system.

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P R O B L E M S

1. Is bankruptcy open to every debtor? What is the public policy involved in the creation of bankruptcy procedure?
2. What does a discharge in bankruptcy do for a debtor? What obligations are not discharged?
3. For what purpose were the sections covering corporations and municipalities recently included?
4. Explain the receivership process involved. Is there a relation to bankruptcy?
5. How does the reorganization plan become a part of a receivership? Is it a legal or general business matter?
6. Explain why receivership plays a more important part today than it did fifty years ago.
7. What do you understand to be a receiver's duties? Who normally acts as receivers and why? Do you criticize such appointments?
8. How can solvent business concerns have an interest in bankruptcy and receivership procedure?
9. "Receivership endeavors to straighten out the affairs of a firm; when it is complete the business resumes." Indicate any social losses involved in the process.
10. What connection, if any, can you find between management policies and business failure?

PART VIII

THE GOVERNMENT AND BUSINESS

MOTION PICTURE FILMS

FILMS FURNISHED FREE OF CHARGE

*Source: Y.M.C.A.
Motion Picture Bureau
Chicago, Ill.*

- * Money-Making Industry (1 reel)—Coinage.

*Source: Society for Visual Education, Inc.
327 S. LaSalle St.
Chicago, Ill.*

- * A Citizen and His Government (2 reels)—Shows the many services our government performs.

*Source: United States Department of Agriculture
Division of Motion Pictures
Washington, D. C.*

- + 1. Field and Services (1 reel)—Services of the department.

- * 2. How Federal Inspection of Imported Seeds Protects the Farmer (1½ reels).

- * 3. The United States Department of Agriculture (1 reel)—Major activities.

- § 4. The Honor of the Little Purple Stamp (1 reel)—Meat; inspection service.

*Source: United States Bureau of Air Commerce
Washington, D. C.*

- + Safety on the Federal Skyways (5 reels)—Construction, operation and maintenance.

RENTALS

*Source: Bray Picture Corp.
Education Dept.
729 Seventh Ave.
New York, N. Y.*

- * ‡ Story of the Coast Guard (8 reels)—History of the service.

*Source: Kodascope Libraries, Inc.
33 W. 42nd St.
New York, N. Y.*

- * Science of Weather Prediction (1 reel)—Weather bureau at work.

* Available in both 16 and 35 mm.

† Available only in 16 mm.

‡ Sound films.

§ Available in 35 mm. only.

CHAPTER XXXIX

GOVERNMENT ASSISTANCE AND REGULATION

As we have seen in the early part of this work, the business executive faces two types of problems: (1) those that are internal, arising from the fact that he must operate each department in his enterprise and co-ordinate the work in all departments; and (2) those that are external, arising from the fact that the business must be operated in the social and economic setting. Some business problems, in other words, originate because business units are not isolated but are, instead, a part of the social whole. From every side the forces of other social institutions converge upon the business enterprise. The home, the church, the educational system, the government—these are but a few of the institutions that complicate the problems of the business executive. Every business decision rests in part, at least, upon the consideration of these external factors. For example, the presence of strong trade-unions may prevent a businessman from bargaining with his employees in the way that he prefers. Ethical and moral precepts engendered by religious and educational institutions influence his decisions with regard to treatment of employees, methods of advertising, and goods and services offered to the public. Additional limitations are imposed upon him by trade associations, by competitors, and by such facilitating businesses as banks and railroads.

Especially important is the relationship which exists between government and business. Furthermore, the trend of modern times seems to warrant the conclusion that business is to become increasingly aware of governmental influence. In view of this trend, the remainder of this book is devoted to a somewhat detailed inquiry into the origin, character, and extent of the relationship between government and business.

THE ROLE OF POLITICAL THEORY

It should not be supposed that all government practice is built upon existing political theory. On the contrary, in many instances a political theory is developed for the purpose of rationalizing existing government practice. Moreover, political theory is not used consistently. A businessman, for example, may be convinced that increased government interference in business is completely unsound if the sale or price of his products is to be the object of government interference. He may, on the other hand, be convinced that government interference in the form of tariff protection for his products is highly desirable. Aside from the way in which it is developed or used, however, much of the great body of political theory concerns the function of the state. As a background for our discussion of the relationship of government to business in modern industrial America, a brief survey of political theory will be given here.

The theories of the function of the state can be arranged under five broad headings: anarchism, individualism, government regulation, socialism, and communism.

Anarchism

Anarchism, which is based upon a belief that the individual is of supreme importance, advocates the complete abolition of the state. Rules and restraints, if any, are imposed by the conscience of the individual and the individual alone is responsible for the well-being of his own person and the safekeeping of material things with which he has identified himself. Anarchism is not of sufficient importance in the modern world to warrant further discussion in this work.

Individualism

Individualism is the political theory that has found widest acceptance in the past hundred and fifty years in the United States. Its economic implications are expressed in their most complete form in *The Wealth of Nations*, written by Adam Smith and published in 1776. In developing the theory of economic individualism Smith postulated the "economic man." All men, he said, are keenly aware of their own economic well-being

and if left alone they will always do those things and only those things that are conducive to their own economic advantage. In the absence of interference man will direct his energies into the most profitable enterprises. He will produce the most scarce and the most needed goods and services. For the greatest social good, therefore, the state should impose the minimum of restraints upon the individual.

Under the theory of individualism, or *laissez faire*, government is relegated to a position of minor importance. The state must protect its citizens from invasion from without, it must protect its citizens from unruly members within, it must provide an educational system for its citizens, and it must engage in such public works as the building of roads and bridges and the coinage of money. Further than this the state must not go. In brief, the state is obligated to provide a wholesome and orderly environment in which rational and self-reliant individuals can produce, exchange, and consume goods and services without interference.

Under this theory the factory system developed in both England and the United States. Individualism reigned supreme in this country as long as the economic units were small and isolated. It is still the predominant theory of most agricultural regions and of the very large and powerful corporate units that want to be free from government supervision and regulation. Although individualism is the theory of the strong, it still has many proponents who have no special interests involved and who nevertheless maintain a belief that the rigors of individualism will eliminate the unscrupulous and reward the diligent.

Government Regulation

With the development of a highly complex society during the latter part of the nineteenth century and with the growth of large and powerful corporations, it became evident to many law-making bodies that the continued application of the theory of individualism to all phases of economic activity would defeat the aims of the theory. Contrary to the implications of individualism, the interests of the individual and the interests of society were apparently not identical. Out of this development grew the third body of theory dealing with the functions of the state—the theory of government regulation.

Government regulation rests upon the conviction that general social welfare is of greater importance than the welfare of the individual. It maintains that strong individuals may take advantage of the weak and that since strong individuals are relatively few in number, the greater part of the social group suffers from the unregulated enterprise of the strong. Accordingly this theory regards the state as an institution necessary to promote the social welfare. It must lay down the "rules of the game." The state must prohibit practices detrimental to individuals and groups. It must promote and assist business. It must regulate some types of business, especially those tinged with public interest. It must stand ready to curtail the rights of individuals wherever it is necessary to protect equally important rights of a group.

Application of this theory is reflected in tariff regulations, subsidies, health and safety legislation, the proposed child labor amendment, antitrust acts, regulation of light and power companies, the National Industrial Recovery Act, and many others to be discussed in greater detail in the pages to follow. The philosophical foundation for government regulation has been provided chiefly by certain economists.

Socialism

The proponents of socialism assign a position of even greater importance to the government than do the advocates of government regulation. Socialism, which assumes that the existence of private ownership of goods used for production purposes inevitably leads to exploitation, proposes that all instruments of production be owned and operated by the state. In support of this proposal the socialists point to the recurring periods of business depression and widespread unemployment that come with great regularity under the present system. They claim that under the present system production is restricted in the interests of greater individual profit, and that through wasteful, competitive advertising and selling many worthless goods are forced upon a helpless public. The socialists charge that the present system of marketing goods increases the ultimate price needlessly, and that concentration of wealth in the hands of a few inevitably exists alongside of widespread poverty. The remedy for these evils—the pro-

motion of social welfare and the most complete realization of individual happiness—is to be found, they say, in state ownership and control of all productive equipment.

The roots of socialism reach far back into antiquity. Since the beginning of recorded history scarcely a century has failed to produce prolific writers advocating the adoption of some form of socialism. The fruits of this agitation, however, have been slight. In our own country the application of socialism has been largely confined to government ownership of light, power, and water companies.

Communism

Communism proposes that the state be assigned a position of supreme importance and that the interests of the individual be submerged in the interests of the social group. Communism differs from socialism in that it proposes that the state own and control all production goods and most forms of private property.

G O V E R N M E N T - B U S I N E S S R E L A T I O N S H I P S

In the United States today the relationship of the government to business falls almost entirely under the headings of individualism and government regulation. The remainder of this chapter is devoted to a description of these relationships and an examination of the manner in which, and degree to which, state action affects business problems.

Government Assistance to Business

Because it believes that improved industry and commerce are necessary to the general social welfare, the government engages in many activities that are designed to promote and assist private businessmen in the development of their enterprises. Wherever it is practicable for them as individuals to engage in the activity for profit, the government usually remains aloof; wherever the public interests may not be adequately protected by private business, the government intervenes. It should be noted that the Federal government engages much more in business promotion activities than do the State and municipal governments.

Trade Assistance.—Businessmen who are engaged in foreign or coastwise trade are the recipients of a great deal of government assistance. The Federal government promotes safety of private enterprise by providing lighthouses, lightships, coastguards, and quarantine and inspection service. Storm warnings and weather information are also furnished by the government.

The Consular Service and the Bureau of Foreign and Domestic Commerce maintain contacts in all foreign nations and are charged with the responsibility of promoting American business abroad. These agencies gather and distribute all available information concerning foreign laws, tariffs, and trade restrictions; they do all that they can to protect American patents in foreign countries; and they attempt to adjust trade disputes that arise from time to time between American and foreign business firms.

Departments of Commerce and of Labor.—By compiling and disseminating information relative to methods and costs of merchandising, market areas, consumer choices, credits and collections, and so on, the Department of Commerce assists persons engaged in domestic commerce. Additional assistance comes to the business executive from the Bureau of the Census, which provides detailed statistical information concerning all industries, occupational shifts, and population changes.

The Department of Labor collects and distributes elaborate reports on the volume of employment for various classes of labor and on the earnings of workers in most industries. It publishes and distributes detailed information on labor laws and their interpretation by the courts. It reports investigations of industrial relations machinery, safety devices, and occupational disease.

The Federal Constitution provides for the granting of patents and copyrights as a means of promoting 'private enterprise. Under this provision Congress protects inventors and authors of original material for specified periods of time.

Bureau of Standards.—The Bureau of Standards is of great importance to business. In addition to its work of maintaining accurate standards of weights and measures used in business, it conducts an elaborate program of experimentation and standardization, testing and analyzing almost everything used in the business world. Its tests and experiments with rubber, paper,

lighting equipment, heating and power plants, building materials, metals of all kinds, fireproofing methods, automobiles, and countless other products in daily use, have been invaluable to business progress. As a result of these experiments the Bureau has established standard specifications for almost all goods. Buyers can purchase on specification with greater certainty of getting a product that will meet their needs, and both producers and consumers have benefited greatly thereby.

One of the greatest services rendered by the Bureau of Standards is the promotion of standardized goods and practices in commercial enterprises. Although the Bureau does not take the initiative in fixing the standards, it does arrange for conferences between representatives of the various units of an industry for the purpose of setting up standards and grades of materials, processes, tools, products, and so on. Simplified practice was encouraged during the World War as a means of conserving materials and productive energy. By greatly reducing in numbers the various models of milk bottles, pocket knives, blankets, paving bricks, wheels, chains, bed springs, and countless other products, the Bureau has contributed much toward the conservation of raw materials. It has caused improved products to be available to consumers and has been helpful in eliminating much excess, high-cost industrial equipment, and in otherwise reducing costs of production.

Domestic Commerce.—Business activity is further encouraged by government participation in the widening and deepening of rivers, the building of canals, the development of flood control, the maintenance of harbors, the reclamation of swamp lands, and the irrigation of arid regions.

Many departments of the government engage in research programs and make the results available to private enterprise. An example is the Department of Agriculture, with its researches into the elimination of the gypsy moth, the corn borer, and the cotton boll weevil, all researches which have been very helpful to agricultural enterprise. Another example of governmental assistance is afforded by the Bureau of Mines, which maintains a completely equipped mine operated for experimental purposes. Experimentation with various types of explosives and the designa-

tion of those that can be used safely in mining have saved hundreds of lives.

Tariff.—Almost from the beginning of our national existence the Federal government has encouraged the development of certain industries through the erection of tariff barriers against foreign-made goods. In other words, the government imposes a tax on certain goods of foreign origin and collects this tax at the time of entry into this country. Domestic goods produced at about the same production cost are thus given a price advantage over the foreign competitor, and goods produced at a higher cost in this country than in foreign countries are enabled to compete with these foreign products on even price terms. Although it is doubtful whether our tariff policy has been of benefit to the nation as a whole, it has certainly encouraged the development of the industries thus protected.

Agricultural Aids.—The Bureau of Agricultural Economics is of great assistance to the farmer. Of particular importance is the Bureau's work in the field of agricultural marketing. Studies have been made of farmers' co-operative associations and the published results are available to all interested. Government representatives assist farmers in the formation of co-operative societies, and give expert advice on organization structure, the use of contracts, accounting systems, and selling methods. The Federal Farm Board, established in 1929, renders service of the same type.

Emergency Aid.—Following the depression of 1929 additional aids to business were developed. Of particular importance is the direct financial assistance provided by the Reconstruction Finance Corporation. During the depth of the depression many business enterprises found themselves sorely in need of funds which were not available through the usual private channels. In order to prevent widespread failure and liquidation of business the Reconstruction Finance Corporation was organized, the stock being subscribed by the United States government.

The Corporation was empowered by Congress to make direct loans to banks and trust companies, insurance companies, credit unions, building and loan associations, agricultural credit corpo-

rations, small industrial units, and other institutions of similar character. When approved by the Interstate Commerce Commission, loans can be made also to railroads under construction or already operating in interstate commerce. The Corporation is empowered to purchase preferred stock of banks and insurance companies that require funds for capital purposes. Reconstruction Finance Corporation loans outstanding to date total approximately two billion dollars.

Granted that all of the foregoing activities are helpful instead of regulatory, it cannot be denied that they influence the character of private business. Furthermore, it is probably safe to predict that activities such as these will be expanded and enlarged in the future.

GOVERNMENT REGULATION

Regulation under the Police Power

Although the State constitutions do not specifically grant the power, the courts through judicial interpretation have given the State governments the authority to pass legislation intended to protect the health, safety, morals, and general welfare of their citizens. This power, known as the police power, in recent years has been applied in an ever-growing field. Extension of the police power has been retarded from time to time, but for the most part the courts have shown a willingness to restrict the property rights of individuals whenever continued exercise of these rights has seemed to endanger the welfare of a large group. In short, the police power is the people's protection against the abuse of individual rights by powerful and unscrupulous persons and corporations, and the courts have shown a disposition to validate the exercise of the power in order to protect the social group.

Since much of our regulatory legislation is based upon the police power, its exercise is of particular importance in the determination of the relationship between government and business. Condemnation of unsafe buildings, compulsory education requirements, and quarantine laws are examples of legislation enacted under the police power authority. Two or three phases of State

labor legislation are of sufficient importance to business to warrant discussion in greater detail.

Labor Legislation

Early experience with laissez-faire capitalism demonstrated the fact that the individual worker in an industrial establishment did not have the power to protect himself against the hazards of long hours of work, unsafe equipment, and unsanitary working conditions imposed by unscrupulous employers. This became more and more apparent as industry became more highly mechanized and as greater numbers of workers were congregated in relatively small areas. There developed a large class of workers entirely dependent upon wages for their livelihood. A great many women and children were forced into the wage-earning group to supplement the inadequate earnings of the chief breadwinner of the family. All but a very few of these workers were without the bargaining power of a strong labor union and as a result were forced to accept the terms of employment established by the employer. Most workers found themselves under a severe handicap when bargaining as individuals with employment managers of large corporations. Workers were unfamiliar with the technique of bargaining; they had little, if any, financial reserve and were under the compulsion of consummating an agreement quickly to meet pressing economic obligations; they realized that the welfare of their families depended upon their success in securing work; and they did not know enough about the labor market to be able to exercise a choice between jobs. All of these things conspired to put the unscrupulous employer in a highly advantageous position and to force the employee to take almost any job that was offered to him.

Realizing that this situation endangered the future life and happiness of millions of our citizens, many States have passed laws designed to protect the workers from the hazards to which they are exposed. In all of these laws the rights of individual employers have been curtailed at certain points, but the laws were passed for the benefit of the many at the expense of the few. In most instances the courts have validated these laws.

Minimum Wage Legislation

There has long been a general conviction that every worker should receive a wage sufficient to maintain a standard of living at the health and decency level. This conviction is based upon two beliefs; first, that workers as human beings have an inalienable right to the health and decency standard; and second, that it is necessary to distribute sufficient purchasing power among the working population to assure a balance between the social ability to produce and the social ability to purchase. When wages necessitate a standard of living below the health and decency level, the physical well-being and morals of the workers are put in jeopardy. When aggregate wages are insufficient to maintain the balance between ability to produce and ability to purchase, stagnation of business and widespread unemployment follow.

Realization of the social evils resulting from starvation wages led the State of Victoria in Australia to pass minimum wage legislation as early as 1896. The results were so successful that many European nations passed similar laws in the early part of the twentieth century. In 1912 Massachusetts passed the first State law in this country, and during the course of the next ten years thirteen other States and the District of Columbia followed. These early laws applied to female labor and provided for either a definite minimum wage or a wage commission charged with the responsibility of determining what minimum wages should be. Unfavorable publicity and penalties followed violation of the laws.

In the early cases that were tested for constitutionality, the courts seemed to incline toward a sufficiently broad interpretation of the Constitution to allow the laws to stand. In 1923, however, the trend was reversed when the Supreme Court declared the District of Columbia law to be invalid on the ground that it violated the constitutional guarantee of freedom of contract.¹ From this time the progress of minimum wage legislation was halted and many of the States repealed their laws.

New hope for successful minimum wage legislation was

¹ *Adkins v. Children's Hospital*, 261 U. S. 525 (1923).

awakened in 1933. Since that time several States² have passed laws framed in such a way as to avoid the constitutional conflict. These laws were aimed to prevent the payment of "oppressive and unreasonable value of the services rendered, and less than sufficient to meet the minimum cost of living necessary to health."³ Only two of these State laws have been tested in the Supreme Court. The New York law was declared unconstitutional⁴ but in March, 1937, the Washington law was upheld.⁵ This record leaves the future of minimum wage legislation somewhat uncertain.

Although minimum wage legislation imposes restrictions upon employers of labor, the restrictions are not without advantage. Often productivity is increased, because in order to pay higher wages employers are forced to improve their methods of production, either by installing more efficient equipment or by making better use of what they have. Often, too, increased wages force the workers to increase their output in order to keep their jobs. Finally, once a standard wage is established, the employers that attempt to maintain higher wage standards are protected from the price-cutting employers who attempt to undersell competitors by exploiting their working force.

Hours-of-Work-Legislation

Some States have imposed restrictions upon the number of hours that employees are allowed to work. As is true in the case of minimum wage legislation, the rights of individuals (employers) are curtailed but only for the purpose of protecting the general welfare of a much larger group (workers). Regulation of the hours of employment rests upon the belief that workers must be protected against undue fatigue resulting from long hours of work, because extreme weariness renders workers more susceptible to occupational disease and more vulnerable to the hazards of industrial accidents. It rests also upon the conviction that

² Connecticut, Oklahoma, Illinois, Massachusetts, New Hampshire, Minnesota, New Jersey, Nevada, New York, Ohio, Washington, Oregon, Rhode Island, Wisconsin, South Dakota, Utah, Louisiana, Arkansas, Kansas, Arizona, and the District of Columbia.

³ *Monthly Labor Review*, December, 1933, p. 1346.

⁴ *Morehead v. New York*, 298 U. S. 587 (1936).

⁵ *West Coast Hotel Co. v. Parrish*, U. S. Sup. Ct., March 27, 1937.

workers as human beings are entitled to sufficient leisure time to allow them to enjoy the fruits of their labor. In recent years agitation for shorter hours of work has been based upon the alleged necessity of spreading available work over a larger portion of the working population and thereby preventing widespread unemployment.

Although the courts are loath to interfere with the constitutional freedom of contract of male workers, they have looked upon regulation of hours of work with increasing favor. It seems to be a definitely established principle of American law that the police power can be used to protect women from unreasonable hours of labor, most of the States having established maximum hours for women. The constitutionality of hour regulation for male workers is less certain, but the courts are inclined to the view that such laws are constitutional if it can be clearly demonstrated that the social welfare is endangered by the prevailing working hours. It is necessary, in other words, to demonstrate that either the health or safety of the worker or the welfare of the public is jeopardized. Accordingly, State regulation of hours in hazardous industries has been validated by the Supreme Court.

Federal Regulation of Commerce

During the early years of our national existence the Federal Congress exercised its constitutional power over commerce for two purposes : to increase its efficiency, and to protect it from physical and economic hazards. But as has been pointed out, the development of a more complex national life made it apparent that Congress could not stop with mere promotion and protection. "Commerce is not a thing in itself. It is a vast agency and instrumentality of modern life, and it affects that life in countless ways. It is a vast system whereby people and goods are moved about the country. And the health, safety, morals, and general welfare of the country may be imperiled if objectionable things are moved, or if commodities are moved for objectionable purposes." *

The Federal Congress has no independent police power, and it does not have power to pass direct laws in the interest of the

* S. P. Orth and R. E. Cushman, *American National Government* (F. S. Crofts & Co., 1931), p. 636.

public safety, morals, and general welfare, yet frequently it has used its power to regulate commerce to protect the public welfare. To this end Congress has forbidden the importation of obscene literature and pictures, the interstate transportation of women for immoral purposes, and the shipment of lottery tickets over State lines. Federal regulation of food and drugs and child labor are of sufficient importance to warrant more detailed description.

Food and Drug Regulation.—Prior to 1906 the food and drugs supplied to the public were subjected to no scrutiny whatever. The result was that millions of dollars' worth of food consumed annually was either positively harmful to the consumer or so adulterated as to be almost without nutritive value. The use of formaldehyde, lead, and copper in food preservation was common. Poisonous coal-tar dyes were frequently used to give foods "just the right color." Although some adulterated or misbranded foods were harmless, they cost more than they were worth and consequently reduced the consumer's real income. For example, a combination of molasses and flour was sold for first-grade coffee. Artificially colored glucose was passed off on an unsuspecting public for jelly. Nor were the hoaxes confined to the field of foods. The manufacturers of drugs and medicines were equally culpable. Harmless but wholly ineffective crystals were sold at fancy prices under wildly exaggerated claims. Tonics made of alcohol, artificial coloring and flavoring, and water were sold as sure cures for everything from dandruff to bunions. Eye and skin infections contracted from the use of certain "harmless" cosmetics were common and added greatly to the incomes of eye and skin specialists. These and countless other examples⁷ testify to the inadequacy of the theory of individualism as applied to modern complex business.

Realization that society as a whole was being exploited by a few unscrupulous individuals led Congress to pass the Pure Food and Drug Act in 1906. The Act prohibits the shipment of adulterated or misbranded foods or drugs into any State or to a foreign nation. Further, the Act defines adulteration and misbranding very carefully in order to provide the courts with objective

⁷ See F. P. Hall, *Government and Business* (McGraw-Hill Book Company, Inc., 1934), Chap. XX.

tests upon which to base their judgments. It establishes the Food, and Drug Administration under the jurisdiction of the Department of Agriculture and defines its chief task to be the investigation and testing of foods and drugs offered on the market. Provision is also made for conferences between representatives of the Food and Drug Administration and the companies alleged to be violating the law. At these conferences suggestions for improvement are made by the Administration. Penalties of fines and imprisonment are provided for persons who are found to have violated the Act, and misbranded or adulterated goods in shipment may be confiscated.

Although the Pure Food and Drug Act has a good record of accomplishment, there is a strong feeling that much remains to be done. Accordingly an improved bill was introduced in the Seventy-fourth Congress in 1936 but was not passed.

Special enactments by Congress, regulating the production and sale of milk, meats, and tea, are also administered by the Food and Drug Administration. Evidence of government regulation of meat production is found in the presence of government inspectors in every packing plant engaged in interstate commerce.

Most of the individual States have passed legislation similar to the Federal enactment. The State laws are intended to apply to those industries which are not covered by the Federal legislation. These laws, however, suffer from the same defects that are so apparent in the present Federal legislation: the administrative bodies are endowed with insufficient power and the penalties for violation are too light.

Child Labor Legislation.—The inadequacy of individualism as a theory of government was clearly demonstrated during the early days of the Industrial Revolution. In the absence of regulation by the States, profit-hungry and unscrupulous employers employed children, at times as much as eighteen hours a day, in a most unwholesome environment. Shortsighted or selfish parents, willing to sacrifice the future happiness and health of their children in order to have additional income, consented to the terms of employment; others were forced to consent because they were unable to provide even a minimum living for the family without the income earned by the children.

Whatever the cause, it soon became apparent that widespread employment of children endangered the future welfare of millions of people. The children were denied educational opportunities and their usefulness as future citizens was thereby greatly limited. Long hours of routine employment retarded the physical development of adolescent children at a time when they were particularly sensitive to shock and abuse. Morals were corrupted by constant association with adults of low mentality and morals. Finally, the entrance of children into industry marked the beginning of a keen competition between children and adults for jobs, with the inevitable result that adult wages were depressed. All of these evils resulted from the profit-seeking activities of unscrupulous employers.

Recognition of these evils prompted every State in the Union to pass laws regulating the employment of children. In most instances the laws prohibit the employment of children under fourteen years of age and for more than eight hours a day. Many States also prohibit night work and some provide for attendance at a continuation school.

Congress has passed two important legislative enactments regulating child labor, but both were later declared unconstitutional by the Supreme Court. The first one, passed in 1916, prohibited interstate shipment of goods made in establishments employing children under fourteen years of age, or employing children between the ages of fourteen and sixteen for more than eight hours a day. The court held this invalid as an attempt on the part of Congress to regulate the operation of industry within a State. In 1919 a second law was passed setting up the same standards as were used in the 1916 law but imposing a tax of 10 per cent on the profits of a business enterprise employing children in violation of the law. This law was likewise declared unconstitutional on the ground that Congress had exceeded its taxing power. In 1924 a constitutional amendment that would legalize child labor legislation was submitted to the states, but by January, 1937, only twenty-four states had ratified the amendment.

Although these are but a few of the examples of legislation passed in the interest of the general welfare upon the authority of the police power, they are sufficient to demonstrate one phase of the relationship of government to business. We proceed now

to an inquiry into other regulatory measures that affect the problems of the business executive.

S U M M A R Y

Business problems are either internal or external. The external ones are frequently more difficult to solve and are increasing in number every day. The most fruitful source of external problems is the government.

The relationships of government and business are many and varied. In some instances both Federal and State governments render valuable assistance to business. For this purpose many divisions of the Departments of Commerce, Agriculture, and Labor are maintained.

In other instances business is regulated by government. The State governments invoke the police power in the interest of public health, safety, morals, and general welfare, while the Federal government, which has no direct power to regulate in the interest of the general welfare, accomplishes the same result through its regulatory power over commerce.

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P R O B L E M S

1. It is said that the development of political theory may precede or follow political practice. Can you cite illustrations of both?
2. "Our government is a mixture of many political philosophies—anarchism, *laissez faire*, government regulation, socialism, and communism." Cite instances of each. In what direction do we seem to be going? How do you explain this trend? Do you expect it to continue?
3. "In this country the individual is free to enter any business and to operate it in his own way." Do you agree? Cite specific instances to prove your point.
4. "Through government aids to business the taxpayer contributes greatly to the profits of private business." Cite examples. How can you justify the practice?
5. What is the governmental police power? How can its exercise be justified?
6. "If a person is fool enough to buy poisonous cosmetics, he should be stung." Comment.
7. "Laborers today have the right of collective bargaining and therefore should not be given the benefit of protective labor legislation." Do you agree? Why or why not?
8. Outline the arguments for child-labor legislation.
9. "If we had adequate child-labor legislation we should have no need for minimum wage legislation." List the arguments on both sides of this question.

CHAPTER XL

THE GOVERNMENT AND COMPETITION

There has been a general assumption on the part of most American legislators, business executives, and economists that vigorous competition between business units assures the most economical production and distribution of goods and services. A corollary is the assumption that, since competition is self-regulatory, the social group is assured of high quality products at reasonable prices even in the absence of State supervision.

These assumptions have been derived somewhat as follows: Every businessman wants to make a profit on the aggregate of his transactions. But in order to do so he must first sell his products. Rather than have goods remain on his hands he will sell them at whatever price he can get that is above or equals his gross costs. In view of the fact that consumers patronize those who offer the lowest prices commensurate with the quality and service desired, there is a tendency for all businessmen to shave their prices little by little in order to attract buyers away from their competitors. Classical economic theory maintains that this price-shaving process continues until the price approximates the cost of producing the article. This price, it is maintained, is "normal" and, by implication, it is equitable because the cost of producing any goods is just enough to compensate each factor of production (land, labor, capital, and management) for the amount it contributes to the finished product. This, according to the theory, is the lowest price possible. If the price falls below cost of production, at least one of the production factors will have to be paid less than it contributes to the finished product. In this case the underpaid factor will be withdrawn by its owner from production in the industry in which it is now used and will be transferred to an industry in which it will be paid an amount equivalent to its productivity.¹

¹ The reader should be warned that because of the necessity of abbreviating the description of the competitive process the authors are guilty of great over-

THE COMBINATION MOVEMENT

It very early became apparent to businessmen that highly competitive conditions were not conducive to business welfare. They discovered that the keen competition for additional customers resulted more in bankrupt businesses than in improved management efficiency and lower prices for consumers. Prices resulting from cut-throat competition were low, to be sure, but they were too low to enable the competing enterpriser to stay in business. And once he was eliminated the surviving competitor raised his prices.

The solution to this problem seemed obvious. Competition should be abolished. In accordance with this conclusion shortly after the Civil War a movement designed to diminish the hazards of competition was inaugurated in all industries. On every side attempts were made to develop methods that would restrain competition. The aggregate of these methods is known as the Combination Movement, and in order for us to understand the subsequent regulatory laws passed by the Federal and State legislative bodies, a description of the various types of combination is necessary.

The "Gentlemen's Agreement"

In the decade immediately following the Civil War the most commonly used method of restraining competition was the "gentlemen's agreement." This is an informal understanding among businessmen in the same field that all will follow the same policy with regard to selling prices, credit terms, discounts, and other things of importance to the trade. Each party to the agreement retains its own identity but operates under a tacit agreement with its nominal competitors. For example, two coal retailers in a small town might decide that both would profit if they were to agree upon a fixed price for each of the several grades of coal. They do not combine their businesses, nor is their agreement in writing,

simplification and loose analysis. The reader should follow a more detailed analysis found in any standard textbook in economics. See Broadus Mitchell, *A Preface to Economics* (Henry Holt and Company, 1932), Chaps. VII and VIII.

but it is an understanding—a “gentlemen’s agreement”—which they expect will prove of mutual benefit.

Since most gentlemen’s agreements are secret, there is no way of discovering the total number. It is probably true that this type of agreement is illegal, especially if used by firms engaged in interstate commerce, but few of them are discovered and as a result, few are tested before the courts. It should be noted that an agreement of this type is not very satisfactory as a means of restraining competition since each party remains independent and can terminate the agreement at will.

Another example of restraint of competition is the “Gary dinner.” The first of these took place about twenty-five years ago, when Judge Gary, then chairman of the United States Steel Corporation, called leaders of the steel industry together for a banquet. Speeches followed the dinner, in which sentiment for increased, decreased, or maintained prices was expressed. No attempt was made to consummate formal agreements but steel prices were curiously uniform. Thereafter, the “dinner” became a periodical affair.

The Pool

As business became more complex in the twenty years following the Civil War the urge to compete became keener, and in order to avoid the consequences of more drastic competition a more formal and rigid type of combination—the pool—was developed. The pool differed from the gentlemen’s agreement by imposing restrictions on quantity of output or sales as well as on price, and by making the agreement more formal. Not all pools were of the same character. They can be classified as output pools, territory pools, and profit pools.

When a business became a member of an output pool, it agreed to allow a board of representatives from all participating companies to designate the proportion of the total output that each member could produce. In many of the output pools the board was also given authority to designate the price at which the output should be sold and to define the penalties for violation of the agreement. This type of pool was common between 1880 and 1900 in several industries: wall paper, structural steel, whiskey, gunpowder, and steel rails.

The territory pool is an arrangement whereby each pool member is assigned to a particular market area in which the other members are not allowed to compete. The most famous example of this type of pool is the one in which the Addyston Pipe and Steel Company was involved. This company and five others, producers of cast-iron pipe used by gas and water companies, divided the trade territory of the United States into pay, free, and reserve territories. The reserve territories were those reserved for certain companies and no other companies could compete therein. The free territories were those in which all members of the pool could sell without any restrictions. The pay territory was handled by a board of control which determined the price at which pipe could be sold. Each member of the pool would then submit bids to the board and the one making the highest bid for the privilege of filling the order was awarded the contract.

Although pools were very common during the twenty years before the turn of the present century and although they were fairly effective in reducing competition, they had certain defects that could not be overcome. There was a tendency for pools to raise prices so high that overproduction by members and competition by nonmembers were greatly encouraged. During a period of falling prices members, in order to maintain their own business, would drop out of the pool and cut prices below pool figures. Pooling agreements were outlawed by court decisions under the Sherman Antitrust Act of 1890.

The Trustee Device

Because of the internal weaknesses of pooling agreements business leaders began casting around for a combination device that would bind the members together more tightly and that would have greater stability. The legal talent employed by the Standard Oil Company discovered the means—the trustee device. Under this arrangement forty oil-refining companies, controlling over 90 per cent of the nation's capacity, agreed that their stockholders should turn their stock over to nine trustees in exchange for "trustee certificates." The trustees were thereby given control of the forty companies and they operated them as one, following a uniform policy of production, sales, and prices. Stockholders

were paid dividends on the trustee certificates that they held.

The purpose of the trustee device was to restrain competition. Since the trustees held approximately two-thirds of the certificates they were in a position to buy or "freeze" out competing companies, control output, and fix prices without opposition. The trustees were to the forty member companies what the board of directors are to a corporation.

The trustee device was also used as a means of eliminating competition in a number of other industries, among which were linseed oil, sugar, lead, whiskey, and cordage. When tested, this device, like the pooling agreements, was declared to be illegal by the courts. Its great advantage to an industry was in the permanence and stability which it gave to a combination of business interests.

The Community of Interest

After the trustee device had been declared illegal, it became necessary to perfect another method of combination if the disadvantages of competition were to be avoided. The pool had developed a number of internal weaknesses and it had not fared well before the courts. As a result a new method became necessary. The method devised—a modification of the gentlemen's agreement—was known as the *community of interest*. Under the community-of-interest arrangement a small group of men, representing the controlling interest of competing companies, would meet informally to discuss business problems and would then agree among themselves on a uniform company policy. Frequently a select few would purchase the majority of stock in each of a number of corporations, and after mutual agreement elect themselves to the board of directors of each of the companies. With the same men making up the board of directors of nominally competing companies, uniformity of production, sale, and price policies was easily accomplished. This means of maintaining a community of interest is known as an *interlocking directorate*.

Success of the community of interest as a means of eliminating competition depends upon the voluntary co-operation of the persons controlling the competing companies. In this respect this type of combination resembles the pool.

The Holding Company

The failure of pools and trustee devices to effect permanent abolition of competition led to the development of the holding company. The State of New Jersey passed legislation in 1889 legalizing the holding company form. Immediately thereafter many companies rushed to that State to reorganize under its laws. As the name implies, the holding company is organized for the purpose of holding stock in other companies. It is not an operating company in any sense. Instead it buys and owns the voting stock of operating companies. Nor does the holding company buy stock of operating companies for the sole purpose of getting the dividends. More important is the element of control. Suppose, for example, that there are five competing steel-manufacturing companies, and suppose further that competition has been so keen that none has been able to make satisfactory profits. The chairman of the board of directors of the largest company combines with a few other leaders in the industry to form a new corporation whose charter gives it permission to "buy, own, and sell" the securities of other corporations. The new corporation sells stock of its own and from the proceeds thereof, together with any money the incorporators may contribute, it buys a controlling interest in each of the five competing companies. Once the new corporation has control of the five operating companies its directors can dictate the policies of all of them. If, as is usually true, monopoly profits are desired, uniformity of policy will follow.

It should be added that the foregoing example is really an understatement of what actually happened in the steel industry in 1901. Under the leadership of J. P. Morgan, 180 individual companies were combined under holding company control to form the United States Steel Corporation. This holding company, however, was more ambitious than most, for it brought under unified control not merely a single phase of the steel industry, such as the production of rails, but everything from iron mines and transportation systems to finishing plants producing a wide variety of steel products.

From the standpoint of the businesses involved the holding company form of combination has many more advantages than have the other forms discussed: it results from a formal and rigid

agreement; it gives highly centralized administrative control; it is a method whereby a relatively small amount of capital can be used to effect control over a very large amount of capital; and finally, it is very easily formed. Its legality depends upon the purposes for which it is formed.

Mergers and Consolidations

Since highly centralized administrative control is considered an advantage, it is not surprising that the combination movement culminated in outright fusion of two or more companies. Where one company exchanges its stock for all the stock of competing companies and still maintains its own name, the combination is called a *merger*. Where there is a fusion of companies into one company under a new charter, the combination is called a *consolidation*. In either case the companies involved in the combination movement completely lose their individual identity.

The chief advantage of this type of combination is the ease of administration and the avoidance of conflict that occasionally arise when an attempt is made to harmonize the activities of several individual business units. The chief disadvantage is the difficulty of getting the stockholders of the various combining companies to agree on the ratio at which stock is to be exchanged.

Government Intervention

The history of the combination movement in the United States clearly demonstrates that competition cannot be depended upon to furnish high quality of goods at lowest prices. In order to realize the advantages of large-scale production, monopoly power, and promoter's profits, powerful corporations will crush competition unless some outside force steps in to compel or regulate it; and businesses will combine to the detriment of the consumer unless the public invokes its one effective instrument—the government—to regulate and supervise business activities.

Recognizing—as early as the eighties—that competition could not withstand the assaults of the combination movement, people in almost every State set up a clamor against monopolistic combinations. Newspapers groaned under the weight of complaining letters from subscribers. As a result of this agitation, no less than twenty-seven States had either constitutional or statutory

provisions against large business combinations by 1890. By 1888 the antagonism was so widespread that every important political party incorporated an antitrust plank in its campaign platform.

The Sherman Antitrust Act.—In 1888 Congress provided for an intensive and extensive investigation of the combination movement. In February, 1890, Senator Sherman introduced a bill in the Senate which became a law in July, 1890. The temper of the times is indicated by the fact that the bill was passed with only one opposing vote.² Known as the Sherman Antitrust Act, it provided among other things that every contract or business combination made for the purpose of restraining trade or commerce between the States was illegal; and that every person who should attempt to monopolize commerce or trade among the States should be deemed guilty of a misdemeanor. It provided that persons injured by the activity of a combination might collect damages up to three times the amount of the injury and might get an injunction against continued violation of the Act. It further provided that defendants found guilty of violation of the Act were subject to a fine of \$5,000 and one year's imprisonment.

Between 1890 and 1914 a great many business combinations were prosecuted under the Sherman Antitrust Act. A very brief review of the judicial interpretation of the Act will make clearer the force of government regulation of business. In a case of minor importance to business,³ the court held that the Act condemned combination in restraint of trade in whatever form it happened to take. This case involved not a combination of capital but of laboring men that had interfered with interstate commerce by calling a railway strike. The first case of importance to business did not reach the courts until 1900, five years later, and the decision left serious doubts as to whether combinations could be dealt with effectively through legislation. This case⁴ involved the acquisition of competing sugar-refining companies and the resultant monopoly control of sugar production. Taking a narrow view of interstate commerce, the court held that the companies

² For complete discussion see Henry R. Seager and Charles A. Gulick, *Trust and Corporation Problems* (Harper & Brothers, 1929), Chap. XVIII.

³ *United States v. Debs*, 158 U. S. 564 (1895).

⁴ *United States v. E. C. Knight Company*, 156 U. S. 1 (1895).

were engaged in the manufacture of sugar and that since *manufacture* was not *commerce* the Sherman Act did not apply.

In the Trans-Missouri Freight Association case⁵ the facts indicated that a number of railways had agreed for their own protection to maintain freight rates which were entirely reasonable but the court held the combination illegal on the ground that the law was intended to cover *every* contract or agreement in restraint of trade, however harmless. In 1911 the Supreme Court reversed this decision and liberalized its interpretation of the anti-trust act in the case involving the Standard Oil Company.⁶ In this decision it introduced the famous "rule of reason," holding that not all contracts and agreements in restraint of trade were illegal but only those which were unreasonable. The rule of reason has been consistently applied to cases under the antitrust acts since that time.

The operation of pooling agreements came in for censure before the courts as early as 1899 in a case involving the Addyston Pipe and Steel Company.⁷ After reviewing the facts of the case, the court held that Congress had the power to enact and enforce legislation prohibiting practices which had as a natural result the restraint of any substantial amount of interstate trade. It held, further, that the pooling of territories was a direct violation of the Sherman Act.

The legality of the holding company was discussed by the Supreme Court first in 1904.⁸ The Northern Securities Company had been incorporated as a holding company under the laws of New Jersey for the purpose of acquiring the stock of the Great Northern and the Northern Pacific railways, which were parallel lines. Although this combination was declared to be in violation of the Sherman Act the court held that the holding company per se was not illegal since that type of organization did not in itself destroy competition. Legality of holding companies therefore depends upon the intention of the parties and the degree to which a monopolistic position is accomplished.

⁵ 166 U. S. 290 (1897).

⁶ *Standard Oil Co., et al. v. United States*, 221 U. S. 1 (1911).

⁷ 175 U. S. 211 (1890).

⁸ *Northern Securities Company v. United States*, 193 U. S. 197 (1904).

The case of the American Tobacco Company^{*} is important because this combination was a result of a merger. It was a single large company rather than a combination of individual units. Although it seems that the Supreme Court has been more willing to condone restraint of trade by single companies than by large combinations, the court held in this case that it must go behind the formal organization of a business and look at the practical results. Any form of organization, the court said, is illegal if unreasonable restraint of trade can be proved.

In view of the decisions in these and other cases it can safely be said that the following factors are considered by the courts to be of importance in determining whether the Sherman Antitrust Act has been violated: reasonableness of restraint, form of combination, intention of combining parties, degree of control exercised, possible beneficial effects of the combination, and methods used to accomplish the combination.

As a result of the doubtful success of the Sherman Act between 1890 and 1900, President Theodore Roosevelt led the movement for the establishment of a government agency that could be charged with the effective enforcement of the antitrust acts. As a result, the Bureau of Corporations was created in 1903. Investigations by the Bureau enabled the Department of Justice to deal much more effectively with the combination movement between 1903 and 1914 than it had prior to that time.

The Federal Trade Commission Act.—In 1914 an act designed to make regulation of business combinations easier was passed under the name of the Federal Trade Commission Act. The Act created a bipartisan board of five members charged with the responsibility of preventing the formation and continuation of illegal trade combinations. The commission was given power to make investigations and reports and to issue "cease and desist orders" whenever it discovered a combination working in violation of the antitrust laws. The work of the Federal Trade Commission was preventive in character and much of its most effective work was done in the trade practice conferences to which members of an industry were called for the purpose of discussing methods of eliminating unfair trade practices. With the passage

* 221 U. S. 106 (1917).

of the Federal Trade Commission Act the Bureau of Corporations went out of existence.

The Clayton Antitrust Act.—The many contradictions in court decisions involving the Sherman Act demonstrated the fact that the antitrust laws failed to enumerate specific acts that should be avoided. In order to remedy this defect, the Clayton Act was passed in October, 1914. This law prohibited, among other things, local price discrimination, exclusive selling agreements, tying agreements, holding companies, and interlocking directorates when the effect was to restrict competition or create monopoly. It stated that labor organizations as such were not to be considered as violating the antitrust laws. Furthermore, it gave private parties the right to sue for an injunction against acts in violation of the law and the right to collect threefold damages in the event of injury at the hands of an unlawful business combination.

Without examining in detail the cases tried under the Clayton Act we can list a number of the trade practices that are condemned by the courts in their interpretation of the act. These include: (1) discriminating in favor of merchants who agree to discriminate against the products of a competitor; (2) cutting prices below cost for the purpose of driving competitors out of business; (3) employing spies to discover the secrets of a competitor's business; (4) establishing subsidiary companies as bogus independent companies; and (5) using violence or threats against competitors.

The holding of the Supreme Court in one case¹⁰ is of sufficient importance to warrant a more detailed report. In a decision of March, 1920, the court held that the mere expectation of establishing a monopoly was not sufficient to render a business liable under the antitrust laws and that mere size of a business does not make it illegal. The court held further that illegal practices in the past did not constitute a violation of the antitrust acts if these acts had been abandoned before the case was brought to trial. Finally, the court held that to find the "steel trust" guilty of violating the antitrust acts and to order a dissolution of the company would incur a risk to the public interest. Because of this last statement

¹⁰ *United States v. United States Steel Corporation*, 251 U. S. 417 (1920).

the United States Steel Corporation is frequently referred to as the "good trust."

Beginning in 1918 Congress passed legislation intended to relax the antitrust laws. In that year the Webb-Pomerene Act, which exempted export trade associations from the operation of the antitrust acts, was passed. In 1920 the Transportation Act exempted certain railroad combinations. The Capper-Volstead Act of 1922 exempted farmers' co-operative marketing associations if they met certain requirements imposed by the Act.

Opposed to this tendency to relax the antitrust acts is the Robinson-Patman Act, signed by President Roosevelt June, 1936. This Act amplifies the second section of the Clayton Act in such a way as to suppress more effectually price discriminations which tend to restrain interstate commerce and to create monopoly in any line of commerce. The Act does not, however, prohibit price differentials which make only due allowance for differences in cost of manufacture, sale, or delivery.

REGULATION OF PUBLIC INTEREST INDUSTRIES

The antitrust laws were passed by Congress for the purpose of preventing industries which carry on interstate commerce from engaging in activities deemed to be inimical to the interests of society. The several States have enacted additional regulatory measures directed at those industries that are so intimately related to the public welfare that government supervision and regulation of certain phases of their business is deemed essential. These are the so-called public interest industries—industries that furnish goods or services essential to the general welfare and without which the public would suffer inconvenience. It should be added that the social welfare demands that their goods and services be furnished at reasonable prices.¹¹

¹¹ The authors are not presuming to do here something that the courts themselves have not been able to do. They recognize that the implied definition of public interest industries can be justly criticized, but they feel that a simple working definition is adequate for the purposes intended. For an excellent discussion of the problems presented by these industries see Dexter M. Keezer and Stacy May, *The Public Control of Business* (Harper & Brothers, 1939), Chaps. V, VI, and VII.

When we try to define public interest industry, we discover that there is no objective test. Not even the courts that have had to pass upon the constitutionality of acts regulating specific industries have been able to define them with any degree of precision. Nor have all States taken the same attitude toward them; what is a public interest industry in one State is not in another. We cannot, therefore, indicate at this point the industries which may in the future be subjected to government regulation. Instead we shall have to be content with enumerating some of the industries so regulated and examining the reasons for regulation.

The Courts and Public Interest Industries

In the early seventies an act was passed regulating the rates that large storage grain elevators could charge for their services. The enactment was challenged and reached the Supreme Court in 1877. The court held¹² that grain elevators were effected with the public interest and as such their rates were subject to State regulation. Their reasoning was that because a great part of the agricultural produce of the Middle West had to pass through the Chicago elevators, the owners of these elevators were in a position to charge monopoly prices for their services.

When the subject of railway regulation first came before the courts, the power to regulate was upheld on the ground that the railways operate "under the authority of a public grant of privileges" and that they were therefore under obligation to furnish reasonable rates and services to every member of the public. In the words of Chief Justice Waite, the railways are "given extraordinary powers, in order that they may better serve the public. . . . They are, therefore, engaged in a public employment affecting the public interest, and . . . subject to legislative control as to their rates of fare and freight, unless protected by their charters."¹³ This theory is now generally accepted, and every State has a public service commission that exercises control over these transportation agencies. The Interstate Commerce Act of 1887 established a Federal commission to supervise the service and rates of railways operating in interstate commerce.

¹² *Munn v. Illinois*, 94 U. S. 113 (1877).

¹³ *C. B. and Q. Ry. v. Iowa*, 94 U. S. 161 (1877). Quoted in Keezer and May, *op. cit.*

The banking business has been held to be affected with the public interest and subject to government regulation on the ground that the economic safety and the financial security of the public is intimately related to the operation of the banks.¹⁴ Fire and life insurance companies have likewise been subjected to regulation because they are entrusted with such great amounts of public monies that their efficiency and solvency is of great public concern.¹⁵

The list of industries that, at one time or another, have been declared affected with the public interest is too long for detailed analysis. It is enough to indicate that included in the list are water companies, light companies, messenger service, hotels, toll bridges, telephone and telegraph companies, stockyards, taxicab companies, ice companies, canals, irrigation companies, express companies, and many others.¹⁶

In 1923 the expansion of the public interest concept was halted, and during the next ten years the Supreme Court invalidated a number of State statutes that had been designed to effect control of public interest industries. In the most important case¹⁷ of this series the court ruled that the food, clothing, and mining industries were not affected with the public interest and were not subject to regulation. In supporting its position the court declared that the mere declaration by any legislature that a business is affected with public interest is not conclusive proof that regulation is justified. It added that to be affected with the public interest an industry must be in "peculiarly close relation with the public interest and must be under an affirmative obligation to be reasonable in dealing with the public."

Despite the temporary halt called by the Supreme Court in the Wolff and other cases between 1923 and 1933, it is probably safe to predict, on the basis of recent experience, that the public interest concept will be expanded in the future. In a New York case¹⁸ that involved a State statute establishing a milk control board, the Supreme Court held that a State is free to enact and

¹⁴ *Noble State Bank v. Haskell*, 219 U. S. 104 (1911).

¹⁵ *German Alliance Ins. Co. v. Kansas*, 233 U. S. 389 (1914).

¹⁶ Keezer and May, *op. cit.*, p. 7.

¹⁷ *Wolff Packing Co. v. Court of Industrial Relations of Kansas*, 262 U. S. 522 (1923).

¹⁸ *Nebbia v. New York*, 291 U. S. 502 (1933).

enforce whatever economic policies are reasonably deemed desirable to promote the public welfare. If this interpretation is followed in the future, government regulation will be augmented, and business problems increased rather than diminished.

GOVERNMENT AS A COMPETITOR

The government may exert great influence upon the character of economic activity by entering the business field as competitor to privately owned business. Whenever this happens the government is in a position to establish the level upon which private business must compete. On the assumption that consumers will always purchase from the business offering the lowest prices, considering quality and service, private business must offer at least as much as government-owned business or lose the patronage of the public. This may be illustrated by a description of what has occurred in Lincoln, Nebraska. In 1904 the privately owned light and power company of that city was charging thirteen cents per kilowatt-hour. Tired of paying exorbitant rates for street lighting, the city administration was successful in getting an ordinance that allowed the city to manufacture and sell electric current. When arrangements for sale of city current were completed, the city rate was set at nine cents per kilowatt-hour. The rate of the privately owned company soon dropped to nine cents. Later the city rate was reduced to five cents and again the private rates followed. The great majority of Lincoln people use current furnished by the private company, but the government-owned plant has set the level of price competition. The same results can reasonably be expected to follow in connection with wages paid, service rendered, and quality of goods produced.

That businessmen may reasonably expect additional government regulation of this type in the future is demonstrated by the ever-increasing number of government-owned enterprises and by the fact that the Supreme Court has always given legal sanction to government participation in business as a competitor. In one important case to come before the Supreme Court, that body confirmed without opinion the holding of the State Supreme Court that "in carrying on the gasoline and oil business, as it is involved

in this case [the City of Lincoln, Nebraska] does no violence to the Fourteenth Amendment of the Federal Constitution."¹⁹

Industries in which municipal governments have commonly entered in competition with private companies include water utilities, street railways, gas companies, and telephone systems.

One of the largest government-owned business enterprises is the corporation known as the Tennessee Valley Authority which was created in 1933 by Congress. This corporation is empowered to manufacture and sell fertilizer and nitrogen, to construct power houses, dams, reservoirs, transmission lines and navigation projects, and to produce and sell electric power. Although all issues have not been litigated, the Supreme Court has handed down one decision upholding the constitutionality of the T.V.A. It cannot be doubted that this government project will add to the problems of businessmen in the power industry.

E M E R G E N C Y R E G U L A T I O N

In addition to imposing general regulations on business, the government has always followed the practice of imposing special regulations whenever an emergency made such legislation necessary. A most striking example is found in the regulations forced on the railroads during the World War. At the request of the Interstate Commerce Commission President Wilson took over the railroads and placed them under the direction of the Railroad Administration in order to facilitate the movement of traffic necessary to the successful prosecution of the War. The identity of the various individual systems was lost and all equipment was used wherever needed without regard for individual ownership. All operation policies were determined by the government.

The National Industrial Recovery Act

As a result of the conviction that the competitive system could not be relied upon to bring us out of the business depression into which we were plunged in 1929, the Federal government in June of 1933 passed the National Industrial Recovery Act (the

¹⁹ *Standard Oil Company and Shamp v. City of Lincoln*, 275 U. S. 504 (1927).

N.R.A.). This Act contained provisions for unusual government control of industry. Its intent was to promote industrial recovery and to secure whatever business reforms were necessary to correct the evils of predatory competition.

As a means of accomplishing these purposes all industry was divided into separate trade groups, and each group was to attack its problems co-operatively. Among other things these trade groups were to secure co-operation with labor, increase purchasing power, eliminate unfair competition, promote full utilization of productive equipment, improve labor conditions, and reduce unemployment. Each trade group or association was ordered to draw up and submit their codes of fair competition to the president for approval. When a code had been submitted to the president, hearings were held for the purpose of ascertaining whether the interests of all members of the industry, as well as those of the labor and consumers, were protected. All codes were exempted from the operation of the antitrust acts but monopolistic practices were prohibited. In the event that the president did not approve the wage and hour provisions in the codes he was empowered to prescribe minimum wages and maximum hours. During the time necessary to draw up the codes for each industry, the president's blanket code, or Re-employment Agreement, was put into operation. Under this arrangement all employers agreed to maintain certain standards of hours of work, wages, and child labor until the industrial code could be put into effect.

Regional, state, and local compliance boards were established to hear evidence on alleged violations and to secure compliance with the law. If violations could not be corrected by these boards, the Federal Trade Commission was empowered to institute proceedings in the Federal courts against violators. Violators were subject to a fine of \$500 for each offense, each day of violation being considered a separate offense.

In May, 1935, the Supreme Court declared the Act unconstitutional on the ground that it was an unconstitutional delegation of legislative power to the president, that the Federal government did not have the right to regulate wages and hours of employees working in interstate commerce (on the ground that they indirectly affected interstate commerce), and that no economic emer-

gency could be used to justify unconstitutional seizure of power by the Federal government.

It is not now certain whether the administration will attempt to restore the National Industrial Recovery Act in all of its aspects. In the spring of 1937 Congress voted down the president's proposed wage and hour bill, but there is a general conviction that additional attempts will be made to revive the labor provisions of the N.R.A. From the temper of the public, as shown by a prominent agency for gathering public opinion, it is probably safe to assert that businessmen should be prepared for a recurrence of at least some aspects of this type of regulation.

Other Emergency Regulation

Additional regulatory measures passed by the Federal government as a result of the economic emergency include the following:

1. The Cotton Production Control Act, an act to prevent unfair trade practices in the cotton industry and to put the industry on a sound commercial basis.
2. The Securities Exchange Act of 1934, an act to provide for the regulation of the security exchanges and to prevent unfair practices on the exchange.
3. The Communications Act of 1934, an act to regulate interstate and foreign communication by wire and radio.
4. The Petroleum Administration Act, an act to regulate interstate and foreign commerce in petroleum and its products.
5. The National Labor Relations Act, an act to regulate the relations between employers and employees and to establish a board to determine issues in labor disputes.
6. The Motor Carrier Act, an act to regulate the transportation of passengers and goods by motor carriers operating in interstate or foreign commerce.
7. The Social Security Act, an act to provide for old-age pensions, unemployment insurance, child welfare, and public health.
8. The Banking Act of 1935, an act regulating banks in the interest of sound, effective, and uninterrupted banking practice.
9. The Public Utility Holding Company Act, an act regu-

lating the formation and operation of public utility holding companies.

10. The Federal Power Act, an act providing for the control of licenses and operation of public utility companies.

11. The Bituminous Coal Conservation Act, an act declaring the bituminous coal industry to be affected with the public interest and regulating the production and marketing of bituminous coal.

12. The Agricultural Adjustment Act, an act to regulate the production and sale of certain agricultural products.

There is little that can be said with certainty regarding the future of government regulation of the type discussed in this and the preceding chapter. In the past the government has recognized that as society becomes more complex and as an increasing number of interests and rights come into conflict, an impartial outside agency must step in to adjust disputes and decide issues. In order to preserve the social body, some agency must define and establish priority of conflicting rights. The attitude of our government has been that the rights of the strong and the few should not be exercised at the expense of the rights of the weak and the many. Our government has regulated business in the interest of the public for the past seventy-five years. It seems reasonable to suppose that this trend will not be reversed.

We now direct our inquiry into a different relationship of government to business—a relationship established through the taxing power. Although this relationship is less regulatory in character than the others we have so far discussed, its effect on the character and magnitude of business problems is no less.

S U M M A R Y

History reveals a tendency of business to combine in order to avoid the "wastes of competition." Due to a widespread belief in the social desirability of free competition, however, the Federal and State governments have enacted much legislation intended to prevent the formation of monopolistic combinations. The Federal government has passed, among others, the Sherman Antitrust Act, the Federal Trade Commission Act, and the Clayton Antitrust Act. These basic acts have been modified or ampli-

fied from time to time by the Webb-Pomerene Act, the Capper-Volstead Act, the Robinson-Patman Act, and others.

Many of the State governments have attempted to retain at least some of the advantages of competition by declaring certain industries to be affected with the public interest and regulating certain phases of their business. Grain elevators, insurance companies, banks, public utilities, and milk companies have been so regulated. States have passed regulatory legislation for other industries, but most of these laws have been declared unconstitutional by the Supreme Court of the United States.

In a few cases the government has enforced competition by entering the field of business as a competitor to private industry. This has been especially true in the field of public utilities.

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PROBLEMS

1. "Competition is society's protector." What is meant by this statement? Trace the steps in the reasoning from which this conclusion is drawn.
2. "Under a system of free competition, competition will tend to disappear." How would you explain this rather unusual statement?
3. Explain (a) the pool, (b) the community of interest, (c) the holding company. In what respect does each differ from the outright consolidation?
4. Are you in agreement with the philosophy behind the Sherman Antitrust Act? How might the Act be criticized?
5. Why was the Clayton Antitrust Act passed? How did it differ from the Federal Trade Commission Act?
6. List some industries that seem to you "to be affected with the public interest." What is it that makes an industry fall within the "public interest" category?
7. Do you believe the government should enter the field of business as a competitor? What are your reasons? If you think the government should enter some fields but not all, where do you draw the line? Why?
8. How can the National Industrial Recovery Act be justified? Do you feel that it was a *radical* measure?
9. Examine the list of emergency measures listed in this chapter. How might each one be justified? On what grounds might each be condemned?
10. Write a five-hundred-word essay on the future of government regulation of and interference with business.

CHAPTER XLI

TAXATION AND BUSINESS

"Taxes and death," it has been said, are the two certainties of existence. Taxes have been with us always; the first cry of oppression recorded in history is that of the taxpayer against the tax collector. It is a cry that has been raised throughout many social and political movements of history; it will be raised again. The existence of taxation is so certain and so important that its relation to modern business calls for detailed examination.

Power to Tax

A tax may be defined as a compulsory contribution by a person to the state to be used for the general purpose of government. Under the constitutional form of government the power to tax rests in the people themselves. In our country the people, by delegation of power as defined in the Constitution, grant taxing powers to the state. But no appropriation bill is effective until the duly elected representatives of the people have approved it. This provision is designed to protect the people from the tyranny of taxes without representation.

Other restrictions and prohibitions in tax matters are stated in the various State constitutions. The Federal government, for example, is prohibited from levying a head or other direct tax unless in proportion to the population as shown by the census (Art. I, Par. 8, Federal Constitution). Until the adoption of the Sixteenth Amendment to the Federal Constitution, therefore, it was impossible for Congress to levy an income tax without apportionment. Similar restrictions may be found in the various State constitutions.

E L E M E N T S O F T A X A T I O N

Units of Taxation

Numerous governmental units in our country possess the power to tax. In addition to the Federal and State governments

with relatively broad powers there are the municipal governments and various State subdivisions with limited taxing powers.

The Federal government is granted certain taxing privileges: excises, fees, import duties, income, and inheritance. Of these the right to levy import duties is granted exclusively to the Federal government.

Apart from the exclusive Federal power over imports, and powers reserved to the people, the State governments have general taxing powers. These include the right to levy on property, persons, and occupations, in addition to those taxing rights enumerated for the Federal government. The many but subordinate taxing subdivisions of the various States derive their taxing powers from their State law.

These subdivisions may be classified as counties, municipalities, townships, school districts and special districts such as drainage, irrigation, highway, or electric distribution districts. In 1932, for the country at large, these subdivisions ranked by volume of expenditures as: (1) municipalities, (2) special districts, and (3) counties.¹ Naturally there are many departures from this general picture. For example, in agricultural regions the special districts for schools spend as much or more than the general municipality spends for its few officials and minor services.

Kinds of Taxes

Governmental revenues for the country at large are derived largely from taxes, but income from property, fees, and special charges—assessments for service—usually contribute about 10 per cent of the revenues. In the case of municipalities at large, the sources other than taxes account for 33 per cent of the revenues.² This varies, of course, between large centers, where many services are sold and many licenses issued by the municipality, and small towns, where few services are sold or licenses issued.

Taxes may be levied on a variety of things, each of which is called *the base* of the tax. We may classify the various basis as: (1) persons; (2) general property, both tangible and intangible; (3) consumption excises, on goods purchased; (4) income

¹ *Statistical Abstract of the United States*, United States Department of Commerce, 1935, p. 204.

² *Ibid.*, p. 204.

and profit; (5) corporation form; (6) inheritance; and (7) occupation. Each base may be subdivided into various classes, thus increasing the number of sources. For example, excise taxes are subdivided into general and special. General excises are exemplified by the general sales tax, which is levied upon *all* sales within the taxing jurisdiction, and by the import tax, which applies to an entire class of goods. Special excises single out specific commodities for taxation such as tobacco, liquor, and perfume. Another example is the income base. This is applied at widely different rates to both persons and to business firms, according to income. So, too, in the case of taxes on profits, they are classified as normal, excess, earned or capital gain.

Multiple Taxation

A discussion of the tax bases suggests that because of the many and varied bases of taxation the same subject may be taxed repeatedly. This is frequently the case. In fact taxes may become highly inequitable and discriminatory for two reasons: the dual right to tax held by various governmental units, and the right of taxing units to classify the bases into so many subdivisions. Some business concerns find their products so severely discriminated against by reason of the dual tax burden placed upon them or their products that they find it exceedingly difficult to compete with other lower-priced products that may serve the same purpose. An example of this situation is the railroad corporation, which in recent years has had a stiff competition from the passenger, bus, and the motor truck with its huge trailer. The railroad corporations are forced to pay property, capital stock, corporate franchise, and corporate income taxes, while the competing trucks, frequently owned by individuals, may be taxed only on property and income at the much lower individual tax rates.

Rates of Taxation

The amount of the individual tax may be set up either as an ad valorem or a specific levy. The ad valorem levy is a proportion of the value of the thing taxed. Thus general property taxes are customarily levied as, say, 3 per cent of the assessed property values. The specific tax prescribes a monetary sum for each unit of item taxed without regard to the value of the item. An instance

is the capital stock tax whereby each share of stock is assessed a definite amount, say fifty cents, per share. In this case the levy applies to each share regardless of whether its market price is near zero or far above its par value.

Mechanics of Taxation

The operations of the tax division of the government include several steps. These steps may be classed as: (1) assessment, (2) levying of the tax, and (3) collection. The first and last steps involve the greatest amount of work for the taxing authorities. Business, however, is probably more interested in the assessment procedure than the others.

The assessment process involves reporting to the government the items to be taxed. Where the tax is upon an ad valorem basis this step also requires an evaluation of the item. The authorities may undertake to place the items upon the assessment list by one of two processes: (1) by requiring citizens to report voluntarily the items for taxation; (2) by locating the items themselves and entering their own report. In the former procedure a penalty—an increase in the tax—frequently exists if correct reports are not returned. The latter method is very common for all general property tax assessments because such property is physical and, especially in the case of real estate, because the legal records are available as an index to the amount and location of property. Further, as the general property tax is levied upon an ad valorem basis, the tax official has also to appraise the property for tax purposes.

A process of appeal is usually provided so that the taxpayer may test the fairness of his assessment. He may challenge the correctness of the listing or of the values placed upon the items. Business enterprises commonly find it necessary, and citizens may find it wise, to check the tax roll for possible inequalities in assessments. A great deal of confusion can arise in this matter of valuation for assessment; the problem is to keep the procedure uniform and equitable as between all owners and all property of the same class.

The levying of a tax is a formal procedure to determine the rate of tax and to fulfill the legal steps evidencing the proper exercise of the governmental power to tax. Thus the levy must be

made at the proper time, by the duly constituted authorities, and in accordance with the power granted by law.

Collection of taxes is a highly significant problem in public administration. The taxation system relies upon the voluntary collection of taxes but imposes penalties unless the taxpayer meets the obligation at stated dates. Where this penalty is not sufficient to force the taxpayer to remit, the authorities are empowered by law to take action, so that the items taxed may be forced to public sale. The proceeds of the sale are then applied upon the tax. Taxes constitute the first lien upon all property taxed and become a prior claim to such property ahead of all creditors and owners. Even in bankruptcy the creditors receive payment only after the taxes against the bankrupt's estate are paid in full.

Taxes which are not paid on the date specified accumulate at interest, usually higher than the business interest rate. A business thus has the opportunity of deferring tax payments. This is a common practice but it is not recommended as conservative financial policy.

TAXATION PROBLEMS

The Burden of Taxes

The taxes exacted by the government usually defray the cost of its services to business and to society. In 1927 the greatest portion of Federal taxes, more than 68 per cent,³ was expended for war measures, past or present, and the balance, 32 per cent, was expended for ordinary services. In the case of the State governments, 60 per cent of the costs was incurred for education and public wards, and the remainder for ordinary services.⁴ This may appear to represent a high proportion of payment for services not connected with business, but who can deny that defense, education, and care for public wards are any less a service to business than to individuals? The provision for such items is a service to society, and business is, after all, only a part of society.

Some portion of the tax revenues are invested in more or

³ A. G. Buehler, *Public Finance* (McGraw-Hill Book Company, Inc., 1936), p. 51.

⁴ *Ibid.*, p. 99.

less permanent enterprises that provide necessary services to the community, principally roads, bridges, and public buildings. The government assumes the burden in such cases because the enterprises are regarded as unprofitable for private investment or because it is deemed inadvisable to surrender the function even though it might prove profitable to private business. A number of municipalities have even entered the field of business in competition with the private enterprises. Municipal electric power plants are examples.

These various functions performed by the government contribute to the productive process, but it is obvious that too great a portion of the social income should not be absorbed by government any more than one factor of a business can absorb a disproportionate amount of the costs. The taxes of the Federal government in 1810 amounted to \$1.80 a person, in 1910 to \$7.50, and, at the peak in 1920, to \$63.00. Since 1920 it has remained at approximately \$33.00 a person.⁵ This is a relative growth of 2,500 per cent. The per capita receipts of all governmental divisions in the United States in 1912 were \$28.74, of which the sum of \$19.00, or more than two-thirds, was in the form of taxes. In 1932 the per capita receipts were \$92.18, of which taxes accounted for \$61.00 per capita.⁶ This was a relative growth in twenty years of more than 300 per cent in the amount of per capita taxes. If we compare total taxes paid in 1932 with the national income, we see that taxes consumed 19 per cent of our income. In other words, nineteen cents out of every dollar of income is paid to the various divisions of government.⁷

Apart from the burden of present taxes there is the burden that has been created for the future. The governmental units of the country in the same twenty-year period, 1912-1932, have spent far more than they have received. The money has been raised by borrowing. In 1912 the per capita government debt of the country was \$49.97, while in 1932 it was \$316.53, a growth of 600 per cent.⁸ Between 1932 and 1936 the Federal debt alone has increased fifteen billion dollars, so that the per capita burden

⁵ *Statistical Abstract of the United States*, 1935, pp. 2 and 163.

⁶ *Ibid.*, p. 204.

⁷ *Ibid.*, p. 270.

⁸ *Ibid.*, p. 204.

is now \$431. This is an obligation that ordinarily can be retired only by means of future taxes, and such taxes will have to come from the production of the future.

The burden of taxation falls chiefly upon business enterprise at large, since more than two-thirds of the real property taxed is owned by business concerns—corporate, partnership, and proprietorship—and four-fifths of the Federal income tax is collected from corporate enterprise.⁹ Business in most cases, however, is an assistant to the tax collector. Most of the taxes are passed on to the consumers, thus the burden of taxes bears upon every pocketbook. Even though this is true, business is concerned because taxes become a competitive channel for the expenditure of the consumer's dollar, thereby lessening the total quantity of dollars which can be spent for the products and service of business.

The Purposes of Taxes

Taxes are levied, as was said before, chiefly to pay for the services of government. In Chapter XXXIX, where the importance of government as a factor in granting aids to business is discussed, there appear ample reasons why society has willingly assumed this burden of government. Then in the preceding two chapters dealing with government and business, the growth of governmental functions is traced with reference to business. We can expect, in view of the development of governmental service, that taxes will be constantly on the increase.

Taxes are frequently used as more than a source of revenue; they may be used as a device for economic control. Governments have discovered that the power to tax is a power so great that it may even direct economic forces into different channels from those followed at the time. The effects of taxes levied under a protective tariff act are familiar to all of us and are among the earliest examples of using the tax power for control purposes. Such laws are enacted primarily to foster industry within the country. Numerous laws designed to exert economic pressure upon business now exist. A more detailed analysis of the effects of taxes upon business is warranted.

⁹ *Ibid.*, pp. 177, 189, 268.

General Business Effects of Taxation

Whether with design or by chance taxes have a direct bearing on many business policies and procedures. They affect prices, the allocation of capital, the legal form of business units, personnel policies, and many other important matters.

Effects on Prices.—The price system is the device by which our exchange system reaches a common measurement of exchange values. Through this medium all economic elements are weighed and relative costs determined. It is primarily the task of competitive business to select out of all combinations, as expressed by the prices of the factors of production, one that will keep costs under the sales revenue.

Taxes enter into all prices in some degree. Exactly what influence they exert upon the seller's price depends upon whether his costs are constant, increasing, or decreasing for a unit of the product. If the seller operates under constant cost, the whole of the tax becomes a part of the cost. If the seller operates under increasing costs, taxes force a lowering of the volume of production until some producers drop out of production and the remaining firms recover part or all of the tax. If the seller operates under decreasing costs, the taxes will tend to restrict the volume of production, the price will be raised, and the price increase will be more than the tax because the costs are higher as output is decreased in amount. This latter case is the case of many American enterprises operating with highly mechanized plants, such as automobiles, electrical equipment, and fabrics.

After the imposition of a new tax it is clear that some factors of production in a given business will have much sharper effects on selling prices than others. A business that feels these effects, of course, seeks to combine the less expensive factors successfully in a new combination that will avoid the higher priced factor. Thus one industry furnishing raw materials subjected to a new tax may lose customers, while another industry gains customers for substitute materials free of the new tax and selling at lower prices. Taxes so carried into prices may cause a severe shifting of the existing and profitable combination of the factors of production.

Effects on Capital.—The effect of taxes is reflected in the prices charged for the capital funds of a business. Assuming the element of risk to be equal for all capital uses, new capital is available in greater amounts and at less expense to the fields of business that are least burdened by taxation. It should be noted that the railroads, as exemplified by the case of the Chesapeake and Ohio Railway, pay taxes, in addition to Federal income taxes, equal to 9 per cent of all revenues, while a general industrial concern like the Beatrice Creamery Company pays taxes equal to .7 per cent of its revenue. This variation in tax burden is reflected in the reluctance of investors to advance large sums of new capital to the railway industry. Differences in tax rates are also reflected in interest rates, security prices, and commissions.

Effects on Business Form.—When choosing the form for a particular business from among the available legal forms for business enterprises, the special burdens of taxation to which some legal forms are subjected must be taken into consideration. The corporation, for example, is usually required to pay an annual capital stock tax, while partnerships escape this levy entirely. In some States the corporation is subjected to a special corporate excess tax, a tax upon going-concern value in excess of value of physical property. No other business form is subjected to this tax, though theoretically the basis may exist in others. This is reason enough why a business trust might be selected instead of a corporation for a business form.

The initial rates of the Federal tax upon corporate incomes are 8 per cent as compared with 4 per cent on returns from proprietorships and partnerships. The distinction exists, likewise, in the Federal capital stock tax to which only a corporation is subjected. Certainly many tax disadvantages exist for the corporate form.

Taxation and Specific Business Problems

Taxation problems develop into very specific business ones. An examination of some of these specific problems in business may well be made to lend reality to the case.

Technology.—The Social Security Act of 1936 levies a special Federal tax upon pay rolls of all business concerns included

within that law. To the extent that a business seeks to minimize this burden it will endeavor, first of all, to lessen the number on its pay roll. This will be done probably by further substitution of machines for labor, or perhaps by the purchase from other plants of parts that the particular business formerly made itself. It is certainly true that a number of possible efforts to reduce the tax burden by various readjustments will be tried. Though probably never so intended, this tax may exert a pressure for further technological improvement.

To take another case, a business requiring heavily taxed property investments for production work will be constantly seeking new techniques that will permit the reduction of property investment. Chemical processes furnish a good example of this situation. The discovery of a chemical catalyst that can be substituted for an expensive mechanical process will permit the abandonment of taxable property and machinery.

Industrial Location.—It has already been suggested that the choice of location is influenced by the general tax burden. Another evidence of this force is in the various exemptions from taxes that many communities and even a few States grant industries that agree to locate within their borders.

It is not to be wondered that the steel industry finds some attraction in the South or in the West, when we find that the property tax levies per \$100 of Pittsburgh are \$3.12, those of Cleveland \$2.64, and those of Chattanooga \$2.40. Many of the Southwestern distributive agencies are still located in St. Louis, and this becomes understandable when a comparison is made of property tax levies. St. Louis in 1932 had a \$2.58 levy on each \$100 of property, while Dallas and Ft. Worth, Texas, have a \$3.50 levy. Nor is it to be wondered that shoe-manufacturing firms should relocate in St. Louis with its \$2.58 burden as compared with the \$3.18 in Boston and \$3.05 in Springfield, Massachusetts.¹⁰

Financial Structure.—The Federal corporate surplus tax is a tax designed to force a retention of less earnings in the surplus. In addition to the regular profits tax this law provides a levy of

¹⁰ *Financial Statistics of State and Local Governments*, United States Department of Commerce, 1932, pp. 829, 1083, 1405, 1547, 1672.

7 per cent on the first 10 per cent of profits retained in the business, and for additional profits retained, an increasing rate up to a maximum of 27 per cent on 60 per cent of all profits retained. Rather than pay such taxes many firms will distribute them as bonuses or increased wages to employees and as extra dividends to stockholders.

The effect of this law is certain to lessen the direct reinvestment in plant by the companies themselves, to lessen the profits held in surplus against contingencies, and to lessen the stability of concerns subjected to wide variations in annual revenues. To some degree the law encourages the use of debt in the financial structure, for interest charges are a deduction while dividends are not. Some pressure to go into debt has long existed in those States having capital stock taxes, for such levies obviously become less as the firm finances a greater share of its needs through borrowing.

The exemption of stock dividends from the Federal income tax has heretofore fostered the declaration of stock in place of cash dividends. Thus the taxation policy affects dividend policy in another way. It is likewise true that regulations permitting certain reserves, such as depreciation as allowable deductions in the income tax, have contributed to the exactness with which many firms have followed such practices. This is good financial policy, however, and contributes to conservative practice. The Federal Revenue Department has recently decided to examine the depreciation of all companies and to disallow, in its discretion, credits that have already been taken. This may severely burden good financial practice with new taxes.

Purchases.—As taxes become reflected in higher prices for products, buyers invariably hunt for a substitute commodity. Under the A.A.A. processing tax law which affected wheat, there was a marked lessening of the use of wheat for flour exports. The cotton levy, which caused price increases in cotton, invited the substitution of silk and rayon into the markets. In 1936 the rayon industry was unable to supply the demand. At the present time Diesel engines enjoy an advantage as a power source due, in part, to the fact that gasoline is taxed while fuel oil is not burdened with special sales and excise taxes.

Regular Production.—Repeated suggestions have been made that unemployment could be relieved through exempting from taxes the employer who kept his labor force regularly employed. This procedure would encourage production for inventory offsetting the tendency to allow seasonal demands to be filled by seasonal production. But to make this procedure really attractive the taxes on inventory, too, would need some reduction.

Pricing Policy.—The enactment of a sales tax raises an immediate question as to whether it should be added to prices, and if so, whether it should be added to the price of all products and in what proportions. In the case of small fractional amounts to be collected on inexpensive units of sale, some firms might elect to pay the tax and leave the prices undisturbed. On the other hand, the firm may decide on a general advance in all prices more than adequate to cover the taxes. In this case the sales tax might possibly be distributed in such a way as to increase the price on necessities in greater proportion than on luxury items.

In an effort to make the consumer tax-conscious some firms choose deliberately to mark all sales taxes as an addition to the price. This may mean splitting cents into mills, and it is sure to mean annoying delays in service. But ultimately the delays may become such a nuisance to consumers that they will protest sufficiently to cause an abandonment of the tax.

S U M M A R Y

The matter of business and taxation can best be summarized by the statement that no business escapes taxation. Neither can business escape the daily influence of taxes in their effect upon the various elements of production. Price increases, for example, may cause the business costs to rise so greatly as to ruin the markets, or to absorb all former profits. Business needs to be on its guard constantly, more perhaps as to these specific effects than as to the volume of taxes. As a part of society business, which contributes so greatly to taxes, is interested in the economical expenditure of taxes. Businessmen should recognize, however, they cannot do without many of the governmental services made possible through taxes.

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PROBLEMS

1. How can it be said "the power to tax is the power to destroy"?
2. Why have so many tax units been developed? To what public confusion does it lead?
3. Are all governments possessed of an equal power to tax? To levy all kinds of taxes? Explain.
4. Enumerate the steps involved in the mechanics of taxation. What are the different bases for rates?
5. What justification can you find for taxation?
6. If business can pass along most taxes, why should it oppose the measures?
7. How are taxes used as a regulating device? Is this an altogether new policy?
8. How may taxes that influence prices result in a social loss?
9. How is taxation involved in the social security law? Point out some possible results which may develop contrary to the desired end.
10. Is the flow of capital into a field of business or a territory checked by taxation policies? Use illustrations.

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